

Exhibit 8

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF NEW JERSEY
3 CAMDEN VICINAGE

4 *****
5 IN RE: VALSARTAN, LOSARTAN, MDL No. 2875
6 AND IRBESARTAN PRODUCTS

7 LIABILITY LITIGATION Civil No.
8 19-2875

9 ***** (RBK/JS)

10 THIS DOCUMENT APPLIES TO ALL
11 CASES

HON ROBERT B.
KUGLER

12 *****

13 - CONFIDENTIAL INFORMATION -
14 SUBJECT TO PROTECTIVE ORDER

15

16

17 Continued Remote Videotaped via
18 Zoom Deposition of JUCAI GE, held at the
19 location of the deponent, commencing at 6:40
20 a.m. China Standard Time, on the 27th of May,
21 2022, before Maureen O'Connor Pollard,
22 Registered Diplomat Reporter, Realtime
23 Systems Administrator, Certified Shorthand
24 Reporter.

25

26

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1 - - -
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 4 Direction to Witness Not to Answer
 5 PAGE LINE
 6 None.
 7
 8 Request for Production of Documents
 9 PAGE LINE
 10 None.
 11
 12 Stipulations
 13 PAGE LINE
 14 None.
 15
 16 Questions Marked Highly Confidential
 17 PAGE LINE
 18 None.
 19
 20
 21
 22
 23
 24

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1 P R O C E E D I N G S
 2
 3
 4 THE VIDEOGRAPHER: We are now
 5 on the record.
 6 My name is Judy Diaz. I'm a
 7 legal videographer for Golkow
 8 Litigation Services.
 9 Today's date is May 27, 2022,
 10 and the time is 6:40 a.m.
 11 This is the continuation of the
 12 deponent Jucai Ge.
 13 All counsel will be noted on
 14 the stenographic record.
 15 The witness and the interpreter
 16 are already under oath.
 17 Counsel, you may proceed.
 18 ***
 19 JUCAI GE,
 20 having been duly previously remotely
 21 identified and sworn, was examined and
 22 testified as follows through the interpreter:
 23 FURTHER EXAMINATION
 24 BY MR. SLATER:
 Q. Thank you. Good evening --

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1 good morning.
 2 A. Good morning.
 3 Q. I forgot to ask you last night,
 4 so I need to ask you a question. Rephrase.
 5 As part of your preparation,
 6 did you have an opportunity to see the
 7 questions that you were to be asked during
 8 this deposition pursuant to the order entered
 9 by the judge?
 10 A. I didn't have any chance to
 11 review the list of questions. However, I am
 12 aware of the topics on which I am supposed to
 13 testify. Those three topics I am familiar
 14 with.
 15 Q. I'd like to ask you a few more
 16 questions about that e-mail, Exhibit 295 in
 17 Mandarin, 296 in English, and then we'll move
 18 on to something else. But I need to follow
 19 up on a few things you said at the end of the
 20 session last night.
 21 A. All right.
 22 Q. With regard to the 2013 patent
 23 that is referenced, do you know when that was
 24 first seen by anybody at ZHP?

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1 A. I did ask Jinsheng Lin and Peng
 2 Dong about that. According to Jinsheng Lin,
 3 he came across this patent when he was doing
 4 an online search regarding irbesartan, so he
 5 attached this patent to this e-mail.
 6 Therefore, Peng Dong become aware of that
 7 patent because of this e-mail.
 8 Q. When did Jinsheng Lin do that
 9 search and find the patent?
 10 MR. BERNARDO: Adam, you got
 11 cut off at the beginning, I'm sorry.
 12 BY MR. SLATER:
 13 Q. When did Jinsheng Lin do that
 14 search and find the patent?
 15 MR. BERNARDO: Thank you.
 16 THE WITNESS: According to
 17 Jinsheng Lin, he came across this
 18 patent around the time he was writing
 19 this e-mail.
 20 Whether he conducted the online
 21 search while he was drafting this
 22 e-mail or several hours or several
 23 days before he was drafting this
 24 e-mail, I don't know. All I know is

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1 that at that time he was conducting an
 2 online search regarding the impurity
 3 found in the technical improvement for
 4 irbesartan.
 5 He was trying at that time to
 6 make a comparison in toxicology where
 7 he came across this patent, so he
 8 attached this patent to that e-mail.
 9 He didn't tell me the exact time when
 10 he did the online search.
 11 BY MR. SLATER:
 12 Q. It's your best understanding
 13 that Jinsheng Lin found the patent in
 14 July 2017? Yes or no.
 15 A. Yes.
 16 Q. Had anybody else at ZHP ever
 17 found and read that 2013 patent before
 18 Jinsheng Lin found it in July 2017?
 19 MR. BERNARDO: Object to the
 20 form of the question.
 21 MR. SLATER: I'm going to
 22 reask. I'm sorry, Dr. Shao, I'm going
 23 to reask the question because counsel
 24 objected.

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1 BY MR. SLATER:
 2 Q. Had anybody else ever read the
 3 2013 patent referenced in Dr. Lin's e-mail
 4 before Dr. Lin found it in 2017 during his
 5 online search? Yes or no.
 6 MR. BERNARDO: Object to the
 7 form of the question.
 8 THE WITNESS: I didn't ask
 9 around in ZHP about the patent by
 10 approaching everyone in the company.
 11 I didn't ask people about that.
 12 As for the e-mail itself,
 13 during the preparation, I did have a
 14 discussion with people like Min Li,
 15 Lihong Lin, spelled as L-I-H-O-N-G,
 16 last name L-I-N, Peng Dong, and
 17 Jinsheng Lin.
 18 I did ask Peng Dong and
 19 Jinsheng Lin when they came across
 20 this patent.
 21 According to Peng Dong, he
 22 became aware of this patent through
 23 the e-mail of Jinsheng Lin in the
 24 attachment. That's how he received

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1 the information.
 2 As for Jinsheng Lin, when he
 3 was writing this e-mail, he was trying
 4 to make a comparison in toxicology, he
 5 did some online search, and he came
 6 across this patent.
 7 Again, I did not ask everyone
 8 in ZHP about when they came across
 9 this patent.
 10 Based on what I was told by
 11 Peng Dong, since he was in charge of
 12 the technology of valsartan and he was
 13 also the person in charge of the
 14 technical department at Chuannan site,
 15 to his knowledge, no one else knew
 16 about this patent in Chuannan.
 17 BY MR. SLATER:
 18 Q. Based on your investigation,
 19 nobody else in ZHP was aware of this patent
 20 before it was found by Jinsheng Lin? Yes or
 21 no, is that correct?
 22 MR. BERNARDO: Object to the
 23 form of the question.
 24 THE WITNESS: As to my prior

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1 testimony, to the best of my
 2 knowledge, before Jinsheng Lin came
 3 across this patent, no one else in ZHP
 4 was aware of this patent.
 5 However, I did not ask everyone
 6 in ZHP regarding this patent, which I
 7 already told you. Therefore, I don't
 8 know whether I can respond to this
 9 question with a simple yes or no.
 10 BY MR. SLATER:
 11 Q. The e-mail indicates that there
 12 is an extremely high GMP risk, which is also
 13 referred to as a quality problem, due to the
 14 formation of nitrosamine due to sodium
 15 nitrite quenching of sartans.
 16 That is discussed in the
 17 e-mail, correct?
 18 A. That is not correct.
 19 Q. Looking at the second page of
 20 the e-mail, second-to-last paragraph says in
 21 part, "If it is confirmed as the above
 22 speculated structure" -- which is an
 23 N-nitroso compound -- "then its toxicity will
 24 be very strong, and there will be an

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1 extremely high GMP risk."
 2 That's what the document says?
 3 That's what the words on the page say,
 4 correct? Please answer with a yes or no.
 5 MR. BERNARDO: Object to the
 6 form of the question.
 7 THE WITNESS: The document does
 8 say so, so that's correct. However,
 9 what the document says is inconsistent
 10 with your prior statement.
 11 BY MR. SLATER:
 12 Q. In that same paragraph, the
 13 second-to- -- rephrase.
 14 In the second-to-last paragraph
 15 on the second page of the e-mail, Dr. Lin
 16 also recommends "the optimization of the
 17 valsartan sodium azide quenching process,"
 18 correct? That's what the words on the page
 19 say, right?
 20 MR. BERNARDO: Object to the
 21 form of the question.
 22 THE WITNESS: The document does
 23 include such a sentence. The document
 24 does include such a sentence.

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1 BY MR. SLATER:
 2 Q. In the last paragraph on the
 3 second page of the e-mail, Dr. Lin points out
 4 that in the 2013 patent by the other company,
 5 "they proposed that the use of sodium nitrite
 6 quenching will result in the formation of
 7 N-nitroso impurities." Correct? That's what
 8 the document says, right?
 9 A. That's not the original
 10 wording. I see that in that paragraph, there
 11 is a similar sentence just like that.
 12 Q. In the last paragraph on the
 13 second page, Dr. Lin states that "other
 14 companies have paid attention to the quality
 15 problem very early on." That quality problem
 16 being the quenching with sodium nitrite
 17 resulting in the formation of N-nitroso
 18 impurities, correct?
 19 MR. BERNARDO: Object to the
 20 form of the question.
 21 BY MR. SLATER:
 22 Q. That's what the document says,
 23 correct?
 24 MR. BERNARDO: Object to the

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1 form of the question.
 2 THE WITNESS: The document does
 3 say that other companies have paid
 4 attention to the quality problems very
 5 early on. However, that quality
 6 problem is the problem referred to in
 7 the patent, not your interpretation in
 8 the statement.
 9 BY MR. SLATER:
 10 Q. The quality problem referred to
 11 in the patent is that the use of sodium
 12 nitrite quenching will result in the
 13 formation of N-nitroso impurities, correct?
 14 A. The patent mentioned that
 15 Impurity K will be formed.
 16 Q. And the formation of Impurity K
 17 is the quality problem referred to, correct?
 18 A. That is correct.
 19 Q. Dr. Lin says at the end of the
 20 e-mail -- rephrase.
 21 At the end of the e-mail,
 22 Dr. Lin says words to the effect of, "Leaders
 23 please pay attention to this issue."
 24 He's telling those on the

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1 e-mail, including yourself, that this is an
 2 issue that needs to be addressed, correct?
 3 MR. BERNARDO: Object to the
 4 form of the question.
 5 THE WITNESS: I don't know what
 6 issue are you referring to. Could you
 7 be more specific in your question?
 8 BY MR. SLATER:
 9 Q. The last sentence of the e-mail
 10 says words to the effect of, "Leaders pay
 11 attention to this issue," the issue being the
 12 quality problem with sodium nitrite quenching
 13 resulting in the formation of N-nitroso
 14 impurities, correct?
 15 MR. BERNARDO: Object to the
 16 form of the question.
 17 THE WITNESS: That is
 18 incorrect. I believe it is very
 19 clear, after communication with
 20 Dr. Lin and reading his e-mail, that
 21 he heard from a friend of his that
 22 someone has already tested out
 23 Impurity K in our crude product.
 24 Therefore, he was asking the leaders

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1 to pay attention and find out whether
 2 there's also Impurity K in valsartan.
 3 You cannot take the last
 4 sentence out of context. You have to
 5 interpret this sentence with the
 6 preceding sentences.
 7 BY MR. SLATER:
 8 Q. Dr. Lin referred at the top of
 9 the page to the fact that the impurity that
 10 was being seen in the irbesartan was similar
 11 to the NDMA that occurs in valsartan when
 12 quenched with sodium nitrite.
 13 We've talked about that before.
 14 He said that up above, right?
 15 MR. BERNARDO: Object to the
 16 form of the question.
 17 THE WITNESS: I believe I have
 18 already responded to your questions
 19 regarding this topic yesterday.
 20 BY MR. SLATER:
 21 Q. So the answer is yes, correct?
 22 A. No, it's not like that.
 23 Q. After this e-mail was sent, you
 24 testified last night that Peng Dong and

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1 Jinsheng Lin tested valsartan for Impurity K,
 2 correct?
 3 MR. BERNARDO: Object to the
 4 form of the question.
 5 THE WITNESS: I did not say
 6 both of them tried to test out
 7 Impurity K from valsartan yesterday.
 8 What I said, also supported by
 9 the content of this e-mail, is that a
 10 friend of Dr. Lin's gave him the
 11 information that someone has already
 12 tested Impurity K from irbesartan, so
 13 he did some verification by consulting
 14 an analysis and failed to find
 15 Impurity K from irbesartan.
 16 After he informed Peng Dong,
 17 Peng Dong was also aware of the
 18 result, that there was no Impurity K
 19 identified in an analytical result.
 20 BY MR. SLATER:
 21 Q. So it's your testimony that
 22 when Dr. Lin tested valsartan for
 23 Impurity K -- rephrase.
 24 So -- rephrase.

<p style="text-align: right;">Page 149</p> <p>1 It's your testimony that when 2 Jinsheng Lin tested the valsartan for 3 Impurity K, the test showed that there was no 4 Impurity K? Is that your testimony? Yes or 5 no. 6 MR. BERNARDO: Object to the 7 form of the question. 8 THE WITNESS: No, that's not 9 what I said. What I said was Jinsheng 10 Lin conducted analysis of Impurity K 11 in our valsartan. 12 BY MR. SLATER: 13 Q. Was there Impurity K in ZHP's 14 valsartan? 15 MR. BERNARDO: Object to the 16 form of the question. 17 THE WITNESS: During the recent 18 communication with Jinsheng Lin, he 19 told me that he failed to find any 20 Impurity K in those batches he 21 analyzed in our valsartan. 22 BY MR. SLATER: 23 Q. Do you know whether ZHP ever 24 tested its valsartan manufactured with the</p>	<p style="text-align: right;">Page 151</p> <p>1 have to go back and check. 2 Q. We reviewed the entire document 3 production in this litigation today and could 4 find nothing indicating Peng Dong, Jinsheng 5 Lin, or anybody else in ZHP evaluated 6 valsartan for Impurity K before June 2018. 7 Are you aware of any such 8 documentation in existence? 9 MR. BERNARDO: Object to the 10 form of the question. 11 THE WITNESS: To the best of my 12 knowledge, since I work in the QA 13 department, all I know is that for 14 impurity verification or confirmation, 15 the verification has to be done 16 through methods such as LC-MS. For 17 specifics, I believe we have to 18 consult with the analytical personnel. 19 However, also to the best of my 20 knowledge, for some impurity 21 verifications, there would not be 22 documentation such as chromatograms. 23 Therefore, I believe we have to 24 consult with the specific analytical</p>
<p style="text-align: right;">Page 150</p> <p>1 zinc chloride process and identified 2 Impurity K as an impurity? Yes or no. 3 A. What time frame are you 4 referring to? 5 Q. Ever. Any time. 6 A. To the best of my knowledge, 7 after 2018, Impurity K was identified after 8 further analysis of our valsartan. 9 Q. After this July 27, 20- -- 10 rephrase. 11 After this July 27, 2017 e-mail 12 was sent by Dr. Lin, did ZHP test its 13 valsartan manufactured with the zinc chloride 14 process for NDMA before June of 2018? Yes or 15 no. 16 A. No. At that time, we were not 17 aware of the existence of NDMA. 18 Q. Is there any documentation of 19 Jinsheng Lin or Peng Dong analyzing ZHP's 20 valsartan for Impurity K before June of 2018? 21 A. They did conduct the analysis 22 for confirmation. However, during the 23 preparation, I did not ask them about the 24 documentation of such confirmation. So I'll</p>	<p style="text-align: right;">Page 152</p> <p>1 staff. 2 BY MR. SLATER: 3 Q. Is it your understanding 4 Jinsheng Lin used LC-MS testing to try to 5 identify Impurity K in the valsartan in 2017? 6 A. According to Jinsheng Lin, 7 after he sent out this e-mail, he conducted 8 the analysis using LC-MS, and the analytical 9 result showed that there was no Impurity K 10 found. 11 Q. If anybody were to say that a 12 pharmaceutical company could not have known 13 that quenching the valsartan with sodium 14 nitrite could result in the formation of 15 N-nitroso impurities, for example, NDMA, that 16 would be incorrect, since we know from the 17 patent that another company in China knew 18 that as of the time they drafted their patent 19 in 2013, correct? 20 MR. BERNARDO: Object to the 21 form of the question. 22 THE WITNESS: That's incorrect. 23 BY MR. SLATER: 24 Q. It's right there in the patent.</p>

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1 It says it in the patent dated 2013 by this
 2 other company.
 3 They figured it out, right?
 4 MR. BERNARDO: Object to the
 5 form of the question.
 6 MR. SLATER: I'll ask the
 7 question differently.
 8 BY MR. SLATER:
 9 Q. That's what the patent says.
 10 That's what the words on the page of the
 11 patent say, correct?
 12 MR. BERNARDO: Object to the
 13 form of the question.
 14 THE WITNESS: That's incorrect.
 15 The patent says that the Impurity K
 16 will be formed. The patent didn't say
 17 anything about the formation of NDMA.
 18 In fact, the patent didn't mention
 19 NDMA at all.
 20 BY MR. SLATER:
 21 Q. The patent says N-nitroso --
 22 rephrase.
 23 The patent refers to the
 24 formation of N-nitroso impurities. That's

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1 what the word on the page says, correct?
 2 MR. BERNARDO: Objection to
 3 form.
 4 THE WITNESS: In the patent it
 5 says the Impurity K is one of the
 6 nitroso compounds.
 7 And regretfully, had the patent
 8 been written about the formation of
 9 NDMA, it would have mentioned NDMA.
 10 But NDMA was not mentioned in
 11 the patent, and instead it said that
 12 Impurity K is one of the nitroso
 13 compounds.
 14 BY MR. SLATER:
 15 Q. The point is, doesn't this
 16 patent in 2013 -- this other company
 17 disclosed that the sodium nitrite quenching
 18 could create an N-nitroso compound impurity,
 19 correct?
 20 A. No, that's not correct. The
 21 patent says it was for Impurity K, not
 22 nitroso compound impurities. While
 23 Impurity K is one of the nitroso compound
 24 impurity, the nitroso compound would include

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1 hundreds of different compounds.
 2 Q. Before 2017, did ZHP ever test
 3 any of its valsartan for Impurity K? Yes or
 4 no.
 5 A. To the best of the information
 6 that I collected, given that I didn't
 7 approach everyone in the company, the answer
 8 is no.
 9 Q. The testing that Jinsheng Lin
 10 did in 2017 for Impurity K was required to be
 11 documented by cGMP because it was testing for
 12 a highly toxic impurity in the valsartan,
 13 correct?
 14 A. That's incorrect.
 15 Q. So it's your testimony as the
 16 director of quality assurance at ZHP that
 17 your company can test for highly toxic
 18 impurities that are suspected in your drug
 19 products and fail to document that testing or
 20 the results of the testing? That's your
 21 testimony now, correct?
 22 MR. BERNARDO: Object to the
 23 form of the question.
 24 THE WITNESS: That's incorrect,

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1 because according to Jinsheng Lin, he
 2 did conduct the analysis using LC-MS.
 3 However, as for the
 4 documentation, I already told you I
 5 have to consult with specific
 6 analytical staff.
 7 But he told me he used LC-MS
 8 for the analysis to analyze commercial
 9 batches.
 10 As for the documentation, we
 11 have to confirm with specific
 12 analytical staff.
 13 BY MR. SLATER:
 14 Q. Pursuant to ZHP's SMPs, it was
 15 required that such testing be documented,
 16 correct?
 17 A. As in my prior testimony, I
 18 already stated that this is an analysis and
 19 verification instead of a test.
 20 Q. It was an analysis and a
 21 verification with an LC-MS testing method,
 22 correct?
 23 A. That's correct. That's what he
 24 told me.

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1 Q. Am I correct that if a test was
 2 performed -- well, rephrase.
 3 You would agree with me that
 4 such testing is required to be documented,
 5 correct?
 6 MR. BERNARDO: Object to form.
 7 THE WITNESS: As I told you
 8 before, I am not one of the analytical
 9 staff, and I didn't realize that you
 10 would ask for such specifics. So when
 11 I asked around to gather information,
 12 I did not ask for such details.
 13 Again, what he did was analysis
 14 and verification, not a test. He
 15 simply conducted the analysis and
 16 verification based on the existing
 17 LC-MS method. I believe he must have
 18 the original chromatogram.
 19 BY MR. SLATER:
 20 Q. Why wasn't that original
 21 chromatogram produced to us in discovery?
 22 MR. BERNARDO: Object to the
 23 form of the question.
 24 THE WITNESS: I'm not familiar

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1 with the discovery process and the
 2 production process, so I'm not sure
 3 whether the chromatograms were
 4 produced or not.
 5 However, according to him, he
 6 did the analysis and verification
 7 based on the previous LC-MS
 8 chromatograms. For that I have to go
 9 ask specific analytical staff. I
 10 didn't realize that such details would
 11 be asked about this time.
 12 MR. SLATER: Chris, let's go to
 13 the patent filed July 17, 2018, the
 14 Abstract, please.
 15 Can you make that a little
 16 bigger, please, Chris?
 17 Don't be so grudging. Can you
 18 get it a little bigger, or no?
 19 MR. GEDDIS: Which part do you
 20 want?
 21 MR. SLATER: Let's do the top
 22 half first with the date on it,
 23 etcetera.
 24 Q. Okay. So I'm showing you a

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1 patent that was filed July 17, 2018.
 2 MR. SLATER: And let's minimize
 3 it a little more so we can look at the
 4 title now.
 5 You're going to just have to
 6 make it smaller. I can't read it.
 7 You can just make it smaller,
 8 Chris, just so we can all see it.
 9 That's fine, I'll take a shot.
 10 Perfect. Okay.
 11 BY MR. SLATER:
 12 Q. On the screen is a July 17,
 13 2018 filed patent titled "Method for
 14 Synthesizing Valsartan," and you can see on
 15 the left side the inventors are listed. It
 16 includes Peng Dong, Jinsheng Lin, Min Li, and
 17 several other people.
 18 Do you see that?
 19 A. It's kind of blurry to me. Can
 20 you blow it up?
 21 Now I see.
 22 MR. SLATER: Let's go into the
 23 text, the first paragraph, please.
 24 Perfect.

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1 Q. In the abstract --
 2 A. Sorry.
 3 Q. In the Abstract for the patent,
 4 a little more than halfway down, there's a
 5 sentence says, "The synthesization method
 6 provided in the present invention can avoid
 7 from the process source the possibility that
 8 highly toxic impurities such as
 9 N-nitrosodimethylamine (NDMA), a valsartan
 10 impurity K, and valsartan N-chloride
 11 generated in the azide quenching process are
 12 introduced into the valsartan methyl ester
 13 intermediate, and are further introduced into
 14 the valsartan active ingredient, thereby
 15 ensuring the valsartan medication safety."
 16 That's the last sentence of
 17 that section. Do you see that?
 18 A. Actually, the font is quite
 19 small to me. Can you zoom in?
 20 MR. GEDDIS: I'll zoom in on
 21 the Chinese.
 22 THE WITNESS: Well, if you zoom
 23 in, then half is cut off.
 24 MR. BERNARDO: Is there any way

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1 to expand the dialog box so she could
 2 actually read the text? This is
 3 not...

4 MR. GEDDIS: It's all been
 5 submitted to the link, so she can
 6 access it there.

7 MR. BERNARDO: Dr. Shao, can
 8 you point that out to her?

9 THE WITNESS: I do see such a
 10 paragraph.

11 BY MR. SLATER:

12 Q. And the inventors who filed
 13 this patent, including Jinsheng Lin and Peng
 14 Dong and Min Li, correctly referred to NDMA
 15 as a highly toxic impurity, correct?

16 MR. BERNARDO: Object to the
 17 form of the question.

18 THE WITNESS: Well, the
 19 document does say so, and the Chinese
 20 translation says the same thing.

21 BY MR. SLATER:

22 Q. At the very end of that
 23 sentence, it also indicated that these
 24 changes to the manufacturing process were

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1 necessary to ensure the valsartan medication
 2 safety, correct?

3 A. Well, I see the wording in this
 4 paragraph, "thereby ensuring the valsartan
 5 medication safety."

6 Q. And you would certainly --
 7 rephrase.

8 And certainly having NDMA in
 9 ZHP's valsartan increases the risk for
 10 persons taking those pills to develop cancer.
 11 That's why it's called a probable carcinogen,
 12 correct?

13 MR. BERNARDO: Object to the
 14 form of the question.

15 THE WITNESS: That's incorrect.
 16 That's completely incorrect.

17 MR. SLATER: You can take that
 18 document down, Chris.

19 MR. BERNARDO: Adam, whenever
 20 you get to a breaking point, we've
 21 been going for over an hour.

22 MR. SLATER: Okay. This is a
 23 good time.

24 MR. BERNARDO: Okay. Thank

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1 you.

2 THE VIDEOGRAPHER: The time
 3 right now is 7:43 a.m. We're off the
 4 record.

5 (Whereupon, a recess was
 6 taken.)

7 THE VIDEOGRAPHER: The time
 8 right now is 7:58 a.m. We're back on
 9 the record.

10 BY MR. SLATER:

11 Q. With regard to the NDMA in the
 12 valsartan, without us trying to quantify how
 13 much risk there was, you would agree with me
 14 that the NDMA in the valsartan increased the
 15 risk to some level for the people who took
 16 those pills to develop cancer, correct?

17 A. I disagree.

18 MR. SLATER: Let's put up the
 19 Gomm study.

20 Q. You have this in your binder,
 21 correct? You told me that you have it at
 22 item number 8 in your binder?

23 A. I have reviewed this document
 24 before, yes.

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1 MR. SLATER: Just for the
 2 record, Chris, what exhibit number is
 3 this?

4 MR. GEDDIS: 460.

5 (Whereupon, Exhibit Numbers
 6 ZHP-460A and ZHP-460B were marked for
 7 identification.)

8 BY MR. SLATER:

9 Q. Looking at the first page
 10 towards the bottom of the first paragraph on
 11 the right-hand column, it states in part,
 12 "NDMA is one of the most potent mutagenic
 13 carcinogens in animal models and was
 14 classified by the International Agency for
 15 Research on Cancer (IARC) as probably
 16 carcinogenic to humans."

17 Do you see that?

18 INTERPRETER SHAO: The
 19 interpreter would then read the
 20 corresponding paragraph in the Chinese
 21 translation.

22 THE WITNESS: Yes, I see it.

23 MR. SLATER: Let's go to
 24 page 360, Chris. Left-hand column of

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1 page 360. Perfect. The Biological
2 background, I'm going to look at the
3 first sentence or two.
4 Q. Looking now at page 360,
5 there's a heading that says, "Biological
6 background," and it starts out, "NDMA is
7 classified by the IARC as probably
8 carcinogenic (group 2A). It is carcinogenic
9 in the tissues of experimental animal species
10 with metabolism similar to that of human
11 tissues."
12 Do you see that?
13 A. Yes, I see it.
14 MR. SLATER: Let's go back to
15 the first page, Chris.
16 Q. In the Summary of the study in
17 the Results section, the last sentence
18 states, "A statistically significant
19 association was found, however, between
20 exposure to NDMA-contaminated valsartan and
21 hepatic cancer (adjusted HR 1.16; 95 percent
22 confidence interval [1.03; 1.31])."
23 Do you see that?
24 A. Yes, I see it.

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1 Q. Looking now at the Conclusion,
2 it says, "These findings suggest that the
3 consumption of NDMA-contaminated valsartan is
4 associated with a slightly increased risk of
5 hepatic cancer."
6 Do you see that?
7 A. Yes, I see it.
8 Q. Coming back to the question I
9 asked you right before we looked at the Gomm
10 study, I asked you, with regard to the NDMA,
11 without us trying to quantify how much risk
12 there was, you would agree with me that the
13 NDMA in the valsartan increased the risk to
14 some level for the people who took those
15 pills to develop cancer?
16 MR. BERNARDO: Object to the
17 form of the question.
18 BY MR. SLATER:
19 Q. This study that you brought
20 with you to the deposition indicates yes,
21 there is an increased risk of liver cancer,
22 correct?
23 MR. BERNARDO: Object to the
24 form of the question.

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1 THE WITNESS: That's incorrect.
2 BY MR. SLATER:
3 Q. Are you saying that the Gomm
4 study didn't find a statistically significant
5 increased risk of developing liver cancer?
6 A. As for the NDMA in valsartan,
7 even though there was some statistical
8 significance, it says here no association was
9 found with the risk of cancer overall.
10 That is because, apart from the
11 data, they failed to exclude certain factors
12 that would have certain effects. That's
13 written in their conclusion.
14 So if you only refer to what's
15 said in the front in the Summary, actually
16 that only described the research direction
17 based on IARC's definition.
18 And in terms of the research
19 content, that is inconsistent with your
20 statement. That's why I say it is incorrect.
21 Q. The study -- rephrase.
22 Are you aware that studies like
23 this report the results based on statistical
24 analysis? Yes or no.

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1 MR. BERNARDO: Object to the
2 form of the question.
3 THE WITNESS: I read what's
4 said here. Indeed, this study is
5 based on statistical analysis.
6 However, I also said your conclusion
7 is incorrect.
8 BY MR. SLATER:
9 Q. I asked you if the NDMA
10 increased the risk to some level for the
11 people who took those pills to develop
12 cancer.
13 This study indicates that there
14 was a statistically significant increased
15 risk to develop liver cancer. That's what
16 the finding was in the study with regard to
17 liver cancer, correct?
18 MR. BERNARDO: Object to the
19 form of the question.
20 THE WITNESS: No, it's not
21 correct.
22 BY MR. SLATER:
23 Q. The words on the page of the
24 study document indicate that the study

<p style="text-align: right;">Page 169</p> <p>1 identified an increased risk of liver cancer. 2 That is a true statement, 3 correct? 4 MR. BERNARDO: Object to the 5 form of the question. 6 THE WITNESS: That's incorrect. 7 BY MR. SLATER: 8 Q. So you disagree with the 9 finding documented in the study that there 10 was a statistically significant increased 11 risk for liver cancer, correct? 12 MR. BERNARDO: Object to the 13 form of the question. 14 BY MR. SLATER: 15 Q. Based on your extensive 16 experience as a toxicologist? 17 MR. BERNARDO: Object to the 18 form of the question. 19 THE WITNESS: That is 20 completely incorrect. 21 As I stated very clearly in my 22 prior testimony, I am not a 23 toxicologist, nor am I a 24 pharmacologist.</p>	<p style="text-align: right;">Page 171</p> <p>1 the finding of liver cancer. Can you please 2 answer with regard to the finding of liver 3 cancer, which is all I asked you about? 4 A. Sure. 5 Q. The study found an increased 6 risk for liver cancer, correct? 7 MR. BERNARDO: Object to the 8 form of the question. 9 THE WITNESS: That is 10 incorrect, because even though it says 11 here there's a statistically 12 significant slight increased risk of 13 liver cancer as the conclusion, 14 there's no association indicating this 15 causal effect relationship, even 16 though statistically there was some 17 relationship. 18 So you cannot say that NDMA in 19 valsartan increased the risk of liver 20 cancer. 21 BY MR. SLATER: 22 Q. Do you know that all such 23 studies are stated in terms of whether there 24 is a statistical association shown? Are you</p>
<p style="text-align: right;">Page 170</p> <p>1 BY MR. SLATER: 2 Q. Very simple question. 3 Do you deny that the words on 4 the page of this scientific article indicate 5 that they found a statistically significant 6 increased risk for liver cancer? 7 MR. BERNARDO: Object to the 8 form of the question. 9 THE WITNESS: There was no 10 denial in my prior response. I was 11 simply stating the fact that this 12 sentence only described the process of 13 the study. 14 As for the conclusion of the 15 study, you would have to see the 16 section Conclusion, where it says no 17 association was found with the risk of 18 cancer at all. 19 So you cannot just focus on one 20 sentence which only described the 21 research process and neglect the 22 overall conclusion. 23 BY MR. SLATER: 24 Q. I asked you a question about</p>	<p style="text-align: right;">Page 172</p> <p>1 aware that that's the language of these types 2 of studies? 3 MR. BERNARDO: Object to the 4 form of the question. 5 THE WITNESS: As I stated 6 earlier, I was neither a toxicologist 7 nor a pharmacologist. 8 In order to prepare for this 9 deposition, I worked very hard and did 10 a lot of homework, which includes 11 reviewing this study report and 12 noticed very explicit conclusion. 13 With that conclusion, I 14 conducted discussion with experts. 15 That's why I said I worked hard for 16 this deposition. 17 So I disagree with you. 18 BY MR. SLATER: 19 Q. Now can you answer my question, 20 please, with a yes or no? 21 A. In addition, I only reviewed 22 those two study reports. I did not review 23 any other study reports, so I don't know what 24 kind of language they used.</p>

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1 Q. When you say you don't know
2 what language they used, you're saying you
3 don't know that these types of studies, that
4 the results are stated in terms of whether or
5 not there's a statistical association?
6 MR. BERNARDO: Object to the
7 form of the question.
8 THE WITNESS: Well, I don't
9 know.
10 BY MR. SLATER:
11 Q. Do you know what it means for
12 NDMA to be a genotoxic impurity?
13 A. I agree that NDMA is a
14 genotoxic impurity. However, I do not get
15 your question as to what it means. Can you
16 be more specific?
17 Q. Do you know what it means for
18 something to be genotoxic?
19 A. Maybe it has certain effects
20 such as DNA mutagenic.
21 MR. SLATER: Can you just tell
22 me what that answer was? "DNA" -- did
23 you say "mutagenic"?
24 Dr. Shao, I'm asking what you

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1 said. I didn't hear the word.
2 INTERPRETER SHAO: Yeah. Yeah.
3 The interpreter did say "mutagenic."
4 MR. SLATER: Thank you.
5 Q. The reason that ZHP stopped
6 selling the valsartan with NDMA impurity was
7 because ZHP knew that the potential risk to
8 patients of taking those pills was an
9 unacceptable health risk, correct?
10 MR. BERNARDO: Object to the
11 form of the question.
12 THE WITNESS: That is not
13 correct.
14 MR. SLATER: Let's look at the
15 Gomm study again.
16 We're on it. Page 360,
17 left-hand column.
18 Q. Looking again at the Gomm
19 study, which you yourself brought to this
20 deposition, in the middle of the right-hand
21 side under the heading Regulatory and public
22 health implications, the second-to-last
23 sentence says, "The immediate recall of all
24 potentially NDMA-contaminated valsartan drug

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1 products by regulatory authorities worldwide
2 was necessary in order to protect public
3 health."
4 Do you see that?
5 A. Yes, I see it.
6 Q. So the authors of the Gomm
7 study thought that it was necessary to recall
8 the NDMA-contaminated valsartan drug products
9 to protect public health, right?
10 MR. BERNARDO: Object to the
11 form of the question.
12 BY MR. SLATER:
13 Q. Let me withdraw the question.
14 Do you agree that it was
15 necessary to recall the valsartan --
16 withdrawn, actually.
17 MR. SLATER: Chris, I'm going
18 to change gears and go to another
19 document, so you can take that down.
20 Q. You would agree with me that
21 the risk posed by the presence of the NDMA in
22 your company's valsartan was unacceptable,
23 correct?
24 MR. BERNARDO: Object to the

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1 form of the question.
2 THE WITNESS: I disagree.
3 BY MR. SLATER:
4 Q. In terms of the health and
5 safety for patients, the levels of NDMA found
6 in your company's valsartan were not
7 acceptable from a health standpoint, correct?
8 MR. BERNARDO: Object to the
9 form of the question.
10 THE WITNESS: It's completely
11 incorrect.
12 BY MR. SLATER:
13 Q. From ZHP's perspective, the
14 health risk posed by the levels of NDMA found
15 in ZHP's valsartan was never acceptable,
16 correct?
17 MR. BERNARDO: Object.
18 THE WITNESS: It's not correct.
19 MR. SLATER: Chris, let's go to
20 Exhibit -- previously utilized,
21 Exhibit 127.
22 (Whereupon, Exhibit Numbers
23 ZHP-127A and ZHP-127B were previously
24 marked for identification.)

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1 BY MR. SLATER:
 2 Q. This is an e-mail dated
 3 July 13, 2018 written by Hai Wang to someone
 4 named Mike Shea.
 5 And he says, "Dear Mike, Please
 6 see Valsartan and Valsartan HCZT Recall
 7 Notification and Press Release attached.
 8 Sincerely apologize for any inconvenience
 9 this recall may cause."
 10 And you know who Hai Wang is,
 11 correct? Who is that?
 12 A. Of course. I know that Hai
 13 Wang is the head of sales in our US company.
 14 MR. SLATER: Let's go now to
 15 the attachment to that e-mail, which
 16 is Exhibit 128.
 17 (Whereupon, Exhibit Numbers
 18 ZHP-128A and ZHP-128B were previously
 19 marked for identification.)
 20 BY MR. SLATER:
 21 Q. This is the recall notice
 22 referred to by Hai Wang.
 23 Do you see that?
 24 A. I see this document now.

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1 Q. And you can see in the middle
 2 of the page -- rephrase.
 3 And you can see in the middle
 4 of the page, it states, "The exposure to the
 5 impurity N-nitrosodimethylamine (NDMA) that
 6 was detected in valsartan product line
 7 presents an unacceptable carcinogenic risk to
 8 the intended patient population."
 9 That's what the press release
 10 and information to the customers in the
 11 United States stated per this document,
 12 correct?
 13 A. That document says so. That
 14 did not reflect our company's perspective.
 15 This was added by FDA.
 16 MR. SLATER: Chris, let's take
 17 that down. And let's go -- I'm going
 18 a little out of order of my plan, but
 19 let's go to Exhibit 42 if we could,
 20 please.
 21 (Whereupon, Exhibit Number
 22 ZHP-42 previously marked for
 23 identification.)
 24 ///

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1 BY MR. SLATER:
 2 Q. This document, which I can tell
 3 you is dated September 1, 2018, was submitted
 4 by ZHP to the FDA and titled "Response to
 5 DMF" -- which is Drug Master File --
 6 "Information Request Letter."
 7 Do you see that?
 8 A. Yes, I see it.
 9 MR. SLATER: Chris, let's go,
 10 if we could, to page 8 of 33.
 11 Q. This is a table listing testing
 12 of over 700 batches of the valsartan produced
 13 with the zinc chloride process and the NDMA
 14 results in parts per million.
 15 Do you see that?
 16 A. Yes, I see it.
 17 Q. And you can see that these
 18 levels range from, in the first column,
 19 76 parts per million down to 37 parts per
 20 million at the bottom of that first column;
 21 in the next column, lines 420 and 421, levels
 22 of 107 and 107.9 parts per million.
 23 Do you see that?
 24 A. Yes, I see it.

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1 MR. SLATER: Let's go to
 2 page 11 of 33, the top right of that.
 3 Q. You can see more results. I'm
 4 just starting at column 517 at the top.
 5 167.3, 188.1, 101.9, 115.5, 164.3, 165.1,
 6 172.3, 164.1, etcetera.
 7 You see these are the levels of
 8 the NDMA that was found, and you're aware of
 9 that, right?
 10 A. Yes, I have reviewed this
 11 document.
 12 MR. SLATER: Okay. Let's take
 13 that document down.
 14 Chris, let's go to
 15 CHARLESWANG-271, please.
 16 (Whereupon, Exhibit Numbers
 17 ZHP-461A and ZHP-461B were marked for
 18 identification.)
 19 BY MR. SLATER:
 20 Q. This is an e-mail dated
 21 June 10, 2018 from Charles Wang to Min Li.
 22 Are you aware that Charles Wang
 23 was a toxicologist who was hired by Min Li to
 24 consult for ZHP on the NDMA contamination?

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1 A. To my knowledge, I'm aware that
2 Dr. Wang is a toxicologist and a
3 pharmacologist. He was hired by our company
4 to conduct corresponding research after the
5 NDMA incident.
6 Q. You can see this refers to an
7 attachment, which we'll get to in a moment,
8 which was referred to as "NDMA Safety
9 Assessment and Recommended Limit in Drug
10 Product."
11 And that's because Charles Wang
12 was hired to advise ZHP as to what would be a
13 reasonable limit for NDMA in the drugs that
14 had been manufactured, correct?
15 MR. BERNARDO: Object to the
16 form of the question.
17 THE WITNESS: We did hire
18 Dr. Wang to advise us on the NDMA
19 level standard, because at that time
20 from the regulatory perspective, there
21 was no such standard. So we hired him
22 to see from the regulatory point of
23 view what level should be reasonable.
24 ///

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1 BY MR. SLATER:
2 Q. In fact, ICH M7 had categorized
3 NDMA as part of the cohort of concern, which
4 were chemicals with structures that had
5 extremely high carcinogenic potency, which
6 required a substance-by-substance,
7 case-by-case analysis to establish the
8 levels, and that was something that was
9 understood in ICH at least as of 2013, if not
10 earlier, correct?
11 MR. BERNARDO: Object to the
12 form of the question.
13 BY MR. SLATER:
14 Q. Or do you not know?
15 A. I am aware of general
16 requirements for the levels of mutagenic --
17 or genotoxic, rather, impurities, but I do
18 not recall the specific requirements.
19 Q. Looking now at the text of the
20 e-mail, Charles Wang wrote to Min Li and
21 said, "The attached is draft report for
22 N-nitrosodimethylamine. I can take out the
23 limit of 0.011 parts per million if you are
24 unable to achieve it. See if your client

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1 accept the limit recommended based on the
2 maximum intake of NDMA via food or exposure
3 of indoor air. The limit of 0.011 parts per
4 million is calculated based on the EPA
5 recommended limit for underground water,
6 which won't cause the risk to exceeding the
7 tumorigenesis rate of 10e-6 in lifespan of
8 human being."
9 Do you see what I just read?
10 A. Yes, I see that through the
11 translation.
12 MR. SLATER: Let's go now,
13 Chris, to CHARLESWANG-318.
14 (Whereupon, Exhibit Numbers
15 ZHP-462A and ZHP-462B were marked for
16 identification.)
17 BY MR. SLATER:
18 Q. In this document dated June 13,
19 2018, Charles Wang wrote to Min Li to enclose
20 a revised report with major changes listed
21 below.
22 And you can see he raised the
23 recommended levels now for interim
24 specification 2 parts per million, long-term

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1 specification .625 parts per million.
2 Do you see that?
3 A. Yes, I see it.
4 Q. So in the first report --
5 rephrase.
6 When the first report was sent
7 over, Charles Wang said that he can take out
8 the limit he had established if ZHP was
9 unable to achieve a level that low. Then in
10 this revised report, he's raised the levels.
11 And if you compare those levels
12 to what I showed you on the table in the DMF
13 update, those levels far exceeded all of
14 these levels, correct?
15 MR. BERNARDO: Object to the
16 form of the question.
17 MR. SLATER: I'm going to
18 withdraw the question.
19 BY MR. SLATER:
20 Q. In the first e-mail on
21 June 10th, Charles Wang offered to take out
22 the limit he had calculated if ZHP couldn't
23 meet it. Now here we are three days later,
24 and he's increasing the limits to be asked

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1 for by ZHP.
 2 Do you see that?
 3 A. I've seen both e-mails. After
 4 reading both e-mails, my understanding is
 5 that this described the process where we were
 6 trying to set a standard, because at that
 7 time the regulatory authorities hadn't set up
 8 any such standard.
 9 Q. At this point ZHP was trying to
 10 support the highest level possible in the
 11 hope that it could sell the pills that were
 12 contaminated with NDMA rather than having to
 13 recall all those pills, right?
 14 MR. BERNARDO: Object to the
 15 form of the question.
 16 THE WITNESS: That's incorrect.
 17 BY MR. SLATER:
 18 Q. Let's go now to
 19 CHARLESWANG-391.
 20 (Whereupon, Exhibit Numbers
 21 were marked ZHP-463A and ZHP-463B for
 22 identification.)
 23 BY MR. SLATER:
 24 Q. This document is dated June 18,

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1 2018, and Charles Wang writes to Min Li,
 2 having revising the limit again, and now he
 3 has the limit set at 31.2 parts per million.
 4 Do you see that?
 5 A. I see that.
 6 Q. You are aware that the FDA set
 7 a limit of .03 parts per million, correct,
 8 far lower than the 31.2 that ZHP tried to
 9 convince the FDA to accept, right?
 10 MR. BERNARDO: Object to the
 11 form of the question.
 12 MR. SLATER: I'll withdraw the
 13 question and ask it differently.
 14 BY MR. SLATER:
 15 Q. The FDA ultimately set a limit
 16 of .03 parts per million, which was very
 17 close to the first recommendation by Charles
 18 Wang, in the report where he said he would
 19 change the number if ZHP wanted him to
 20 because they couldn't achieve that number,
 21 correct?
 22 MR. BERNARDO: Object to the
 23 form of the question.
 24 THE WITNESS: That's completely

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1 incorrect, because in the period of
 2 time when this e-mail was written, the
 3 regulatory authorities did not come up
 4 with any standard for NDMA.
 5 So at that time Dr. Min Li was
 6 simply discussing with Dr. Charles
 7 Wang what type of limit would be
 8 appropriate.
 9 By the way, the eventual
 10 standard was not up to ZHP to set. We
 11 could only follow the standards set by
 12 regulatory authorities such as FDA.
 13 So this only shows the process
 14 of discussion as they were trying to
 15 find out what limit would be
 16 appropriate and acceptable.
 17 BY MR. SLATER:
 18 Q. In terms of what actually
 19 happened in June of 2018, the consensus among
 20 those scientists responsible for this issue
 21 in the United States was that this risk was
 22 unacceptable for patients, correct? Meaning
 23 the risks posed by the levels of NDMA found
 24 in ZHP's valsartan, right?

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1 MR. BERNARDO: Object to the
 2 form of the question.
 3 THE WITNESS: This is
 4 completely incorrect.
 5 BY MR. SLATER:
 6 Q. Well, in fact, the scientists
 7 who made the decisions -- well, rephrase.
 8 Well, in fact, the decision was
 9 made to set the limit for NDMA at .03 parts
 10 per million. That's far lower than the
 11 levels that were in ZHP's valsartan, which
 12 means the decision was made that the levels
 13 in ZHP's valsartan were unacceptable,
 14 correct?
 15 MR. BERNARDO: Object to the
 16 form of the question.
 17 MR. SLATER: I'm sorry,
 18 Dr. Shao. Let me withdraw the
 19 question and reask it.
 20 BY MR. SLATER:
 21 Q. The FDA set the level at
 22 0.3 parts per million, which is far lower
 23 than the levels that were shown in the ZHP
 24 valsartan, which shows that the decision was

<p style="text-align: right;">Page 189</p> <p>1 made that the levels in ZHP's valsartan were 2 unacceptable, correct? 3 MR. BERNARDO: Object to the 4 form of the question. 5 THE WITNESS: From the 6 regulatory point of view, ZHP, our 7 company, agrees that to FDA the level 8 of NDMA was unacceptable. 9 However, we do not agree that 10 the NDMA in ZHP's valsartan would 11 cause harm to the patients and pose 12 carcinogenic risk. We don't agree 13 with that, because that's two 14 different perspectives. 15 BY MR. SLATER: 16 Q. It's unacceptable because of 17 the safety risk. That's the definition of 18 "unacceptable," right? 19 MR. BERNARDO: Object to the 20 form of the question. 21 THE WITNESS: That's completely 22 incorrect. As I said before, from the 23 regulatory point of view, we have to 24 be very careful and conservative.</p>	<p style="text-align: right;">Page 191</p> <p>1 follow the requirements of FDA. And the 2 pills with such a level would be 3 unacceptable. 4 Q. The levels set by the FDA were 5 based on a TD50 analysis, correct? 6 A. Well, I didn't go into such a 7 detail to find out about how they set up the 8 levels. All I know is that they did set a 9 level. 10 Q. Do you know what "TD50" means? 11 A. A little, but I can't say I 12 have a clear understanding. After all, I'm 13 not a toxicologist nor a pharmacologist. 14 MR. SLATER: Let's go, Chris, 15 to CHARLESWANG-267, please. 16 (Whereupon, Exhibit Numbers 17 ZHP-464A and ZHP-464B were marked for 18 identification.) 19 BY MR. SLATER: 20 Q. The e-mail at the bottom part 21 of this page was sent by Min Li to Charles 22 Wang on June 21, 2018, regarding a paper on 23 NDMA high-low dose prediction. 24 And he says to Charles Wang,</p>
<p style="text-align: right;">Page 190</p> <p>1 In that case, the level of NDMA 2 in our valsartan product is 3 unacceptable. However, from the 4 scientific point of view, it doesn't 5 mean that the NDMA in valsartan would 6 pose carcinogenic risk. That's 7 completely different thing. 8 BY MR. SLATER: 9 Q. If I understand what you're 10 saying, you're saying from the regulatory 11 perspective, the regulators are very 12 conservative in setting what's unacceptable 13 levels of NDMA because they need to be very 14 protective of people's health, right? 15 A. Can you repeat your question or 16 rephrase your question? I don't understand 17 your question. 18 Q. I'll ask it differently. 19 When you say the levels were 20 unacceptable from a regulatory perspective, 21 that's the reason why the pills could not be 22 sold with those levels of NDMA, correct? 23 A. Based on the current level set 24 up by FDA, then the answer is yes, we have to</p>	<p style="text-align: right;">Page 192</p> <p>1 "Hi, Charles. I need your brain again to 2 take a quick look of this paper. It seems to 3 me that using high dose experiments may not 4 be able to predict low dose results. My goal 5 is trying to demonstrate that a previously 6 reported TD50 for NDMA as cited by our client 7 in her report may not be accurate. 8 "I will talk to you later 9 today." 10 And then up above you say, 11 "This is the Reply from the authors of the 12 paper I sent to you below. It may also help 13 you to evaluate." 14 Do you see that? 15 A. I see it. 16 MR. SLATER: Let's go now to 17 CHARLESWANG-430. 18 Q. Charles Wang responds to Min Li 19 on June 22, 2018, and says, "Hi Min, the 20 paper and Reply that you sent to me were 21 published in early '90s. They are outdated. 22 We should obtain the data from the current 23 publication, especially those published on 24 Regulatory Authority website, EPA, FDA, NIH,</p>

<p>Page 193</p> <p>1 WHO, etc. The TD50 for NDMA listed on NIH 2 website are 0.0959 in rats and 0.189 in 3 mice" -- and it gives a link, 4 "NITROSODIMETHYLAMINE.html and in 2016 EFSA 5 Journal 2016 (see attached)." So there's 6 this link and the citation. 7 He then says, "NDMA is a well 8 known carcinogen in animals and probable 9 carcinogen in human based on EPA 10 classification (Class 2A). 11 "I suggest Huahai to hire a 12 carcinogenicity expert consultant to perform 13 the analysis, who knows risk assessment of 14 carcinogen and kept updated in regulatory 15 guideline and standards in this field. If 16 needed, I can recommend a couple to you for 17 consideration." 18 Do you see that that was the 19 response by Charles Wang to Min Li, who had 20 in the prior e-mail sent a paper where he was 21 trying to refute the use of high-dose animal 22 experiments to predict low-dose results? 23 You see that, correct? 24 MR. BERNARDO: Object to the</p> <p>Page 194</p> <p>1 form of the question. 2 THE WITNESS: I do see what the 3 e-mail says. However, your statement 4 fails to reflect the meaning or 5 intention of this e-mail. 6 MR. BERNARDO: Adam, when you 7 hit a breaking point, we'd like a 8 break. 9 MR. SLATER: I'll take a break 10 now. 11 MR. BERNARDO: Great. Thank 12 you. 13 THE VIDEOGRAPHER: The time 14 right now is 9:15 a.m. We're off the 15 record. 16 (Whereupon, a recess was 17 taken.) 18 THE VIDEOGRAPHER: The time 19 right now is 9:28 a.m. We're back on 20 the record. 21 BY MR. SLATER: 22 Q. You just said you disagreed 23 with my question. Are you now saying that 24 you do understand the TD50 analysis that you</p>	<p>Page 195</p> <p>1 said before you did not truly understand? 2 A. Maybe you misunderstood me. I 3 already told you that I know a little bit 4 about TD50, but I do not know the specifics. 5 After all, I'm not a toxicologist nor a 6 pharmacologist. 7 In general, I understand when 8 setting the limit, TD50 is just to be used to 9 calculate the acceptable limit. That's all I 10 know. 11 Q. The response by Charles Wang to 12 Min Li that we just read a moment ago 13 confirming that NDMA is a well-known 14 carcinogen in animals and probable carcinogen 15 in humans based on EPA classification is 16 consistent with the scientific consensus that 17 ingesting NDMA as a contaminant of valsartan 18 posed a health risk to those people that took 19 the pills, correct? 20 A. That is incorrect. 21 MR. SLATER: Let's go to 22 CHARLESWANG-447, please. 23 Q. Looking at the very bottom of 24 this first page, which goes over to the</p> <p>Page 196</p> <p>1 second page, let's start with that e-mail 2 sent by Charles Wang on July 5, 2018 to Jim 3 MacDonald. 4 MR. SLATER: And you can scroll 5 over to the top of the second page, 6 please, Chris? 7 Q. The e-mail from Charles Wang to 8 Jim MacDonald states, "Hi Jim, Nice to hear 9 from you. Hope everything is going well. 10 Sorry to disturb you during your vacation. 11 My friend's company will have a face-to-face 12 meeting with FDA to" -- it says, "debit if 13 they should recall their product in US market 14 next Thursday, and likes to get some advice 15 from people like you quickly." And I want to 16 stop there. 17 You recall that in the prior 18 e-mail, Charles Wang had suggested to Min Li 19 to hire a carcinogenicity expert consultant 20 to perform the analysis who knows risk 21 assessment of a carcinogen and kept updated 22 in the regulatory guideline and standards in 23 this field, and you can see this is an e-mail 24 written to somebody with that background.</p>
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1 Do you see that?

2 A. I see this.

3 Q. The e-mail continues in the

4 second paragraph, "Not sure if you heard,

5 Huahai Pharma Group, one of the largest

6 generic drug company in China with a branch

7 in US (Cranberry, New Jersey). Li knows

8 their US CEO as well. Huahai has a product

9 in US market with the maximum daily dose of

10 320 milligrams, which recently was found

11 containing high nitrosodimethylamine (NDMA,

12 not know exactly how much but around 30 parts

13 per million). Their client in European Union

14 said it should be at 0.33 parts per million,

15 based on TD50 calculation. They would like

16 to know if they can argue to set limit higher

17 based on NDMA is considered a Class 2A

18 carcinogen (limit at threshold of

19 toxicological" -- I'm blanking on the rest of

20 it, but "TTC of 1.5 ug per day) and the

21 longest duration of human exposure in US will

22 be less than three years.

23 "Let me know if your company

24 can help. I will ask them to contact you

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1 directly and send you more details."

2 Do you see that?

3 A. I see it. I see it.

4 Q. Just to make it clear, I had

5 forgotten TTC for a moment. That's threshold

6 of toxicological concern.

7 Are you aware of that?

8 A. Like TD50, I know a little bit

9 about TTC, but I do not know the specifics.

10 All I know is that in general, TD50 or TTC

11 will be used to calculate the acceptable

12 limit. Actually, there are quite a few ways

13 to make use of those data.

14 Q. Looking at a few things stated

15 in this e-mail, Charles Wang called it "high

16 nitrosodimethylamine" and said he thought it

17 was around 30 parts per million.

18 Do you see that?

19 A. Yes, I see it.

20 Q. And you recall from the prior

21 e-mails we went through that after starting

22 at a level of .0111 parts per million,

23 Charles Wang actually went all the way up to

24 31.2 parts per million, which is just a

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1 little bit higher than what he thought was

2 the levels being seen in the valsartan of

3 30 parts per million.

4 Do you remember he went up to

5 31.2?

6 MR. BERNARDO: Object to the

7 form of the question.

8 THE WITNESS: I see both

9 e-mails, and you're correct. The

10 limit was indeed increased to 31.2.

11 However, I would point out that

12 your understanding or interpretation

13 of all those e-mails are completely

14 wrong.

15 As seeing this e-mail, it did

16 say that the longest duration of human

17 exposure in the US would be less than

18 three years. So when they do the

19 calculation, they're calculating the

20 total amount and they are calculating

21 using a different data from different

22 angles; therefore, I'm unfamiliar with

23 what Dr. Wang was going through at

24 this time.

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1 In order to calculate a

2 reasonable acceptable limit, they have

3 to calculate based on the long-term

4 exposure and short-term exposure.

5 For example, at that time our

6 valsartan was not in the US market for

7 three years yet, so it's not like they

8 tried to increase the limit on purpose

9 so that we could avoid the recall.

10 It was, rather, a process where

11 they would discuss with FDA regarding

12 the limit considering the time of our

13 valsartan in the market.

14 So this, rather, is the process

15 to set the limit. After all,

16 eventually it was up to FDA to set the

17 limit and make the approval.

18 BY MR. SLATER:

19 Q. My question was simply to

20 confirm that the level of 31.2 parts per

21 million which Charles Wang increased up to

22 after starting at .0111 parts per million was

23 just a little higher than the 30 parts per

24 million that he believed was the levels in

<p style="text-align: right;">Page 201</p> <p>1 ZHP's valsartan.</p> <p>2 That's a correct statement,</p> <p>3 correct?</p> <p>4 MR. BERNARDO: Object to the</p> <p>5 form of the question.</p> <p>6 INTERPRETER SHAO: The</p> <p>7 interpreter is asked to repeat the</p> <p>8 rendition.</p> <p>9 THE WITNESS: That's incorrect.</p> <p>10 That is completely incorrect.</p> <p>11 BY MR. SLATER:</p> <p>12 Q. Charles Wang didn't increase</p> <p>13 the levels in his reports from .0111 parts</p> <p>14 per million up to 31.2 parts per million? I</p> <p>15 thought we just went through that in the</p> <p>16 documents.</p> <p>17 Are you disagreeing that his</p> <p>18 level went up to 31.2?</p> <p>19 MR. BERNARDO: Object to the</p> <p>20 form of the question.</p> <p>21 THE WITNESS: As stated in my</p> <p>22 prior testimony, your understanding or</p> <p>23 interpretation of all these e-mails</p> <p>24 were not completely correct.</p>	<p style="text-align: right;">Page 203</p> <p>1 discussion process here.</p> <p>2 BY MR. SLATER:</p> <p>3 Q. You don't understand that they</p> <p>4 were going to meet with the FDA to talk about</p> <p>5 the limit going forward, and that was going</p> <p>6 to be the determiner of whether they could</p> <p>7 continue to sell the pills that they had</p> <p>8 manufactured contaminated with NDMA?</p> <p>9 Do you not understand that?</p> <p>10 MR. BERNARDO: Object to the</p> <p>11 form of the question. Sorry.</p> <p>12 THE WITNESS: As seen in this</p> <p>13 e-mail, he was simply trying to</p> <p>14 collect some information and data from</p> <p>15 the expert so that such data can be</p> <p>16 used in the face-to-face meeting with</p> <p>17 FDA.</p> <p>18 As you know, our company does</p> <p>19 not conduct any toxicological or</p> <p>20 pharmacological studies; therefore, we</p> <p>21 have to rely on experts for their</p> <p>22 information.</p> <p>23 One thing is for sure, is that</p> <p>24 whether valsartan could be sold or had</p>
<p style="text-align: right;">Page 202</p> <p>1 I remember the original level</p> <p>2 of .01 ppm was based on the long-term</p> <p>3 level of the -- or long-term exposure,</p> <p>4 rather, to the groundwater. But the</p> <p>5 limit has to be associated with the</p> <p>6 duration of exposure.</p> <p>7 So over here they were talking</p> <p>8 about the exposure time of three</p> <p>9 years, which is much shorter. So they</p> <p>10 were wondering whether the limit can</p> <p>11 be increased to 31.2 ppm.</p> <p>12 Once again, the limit has to be</p> <p>13 associated with the duration of</p> <p>14 exposure in terms of years. And what</p> <p>15 we see here is actually the scientific</p> <p>16 discussion period where theoretically</p> <p>17 they want to see how much the limit</p> <p>18 can go to.</p> <p>19 It's not like, oh, they already</p> <p>20 know -- or he already knew, rather,</p> <p>21 that ZHP's valsartan has about 30 ppms</p> <p>22 NDMA, so he would increase the limit</p> <p>23 to 31.2, just a little bit above it.</p> <p>24 We're looking at a theoretical</p>	<p style="text-align: right;">Page 204</p> <p>1 to be recalled at that time was not</p> <p>2 decided by ZHP. Rather, it would be</p> <p>3 up to FDA to make the approval, not</p> <p>4 ZHP.</p> <p>5 So we were trying to take</p> <p>6 multiple approaches to collect the</p> <p>7 information and data so that we could</p> <p>8 conduct a meaningful discussion</p> <p>9 face-to-face with FDA.</p> <p>10 BY MR. SLATER:</p> <p>11 Q. You see that Charles Wang</p> <p>12 states that ZHP's client in EU, European</p> <p>13 Union, said that the limit should be at</p> <p>14 0.3 parts per million based on TD</p> <p>15 calculation. And as you're aware, that's the</p> <p>16 level the FDA actually adopted, correct?</p> <p>17 MR. BERNARDO: Object to the</p> <p>18 form of the question.</p> <p>19 THE WITNESS: The e-mail does</p> <p>20 say that the client in the EU said it</p> <p>21 should be added .3 ppm based on TD50</p> <p>22 calculation.</p> <p>23 However, my understanding is</p> <p>24 that is also based on long-term</p>

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1 exposure with no limit of a time
 2 period.
 3 So we're talking about
 4 different standards right here.
 5 MR. SLATER: Let's go to the
 6 first page of the e-mail.
 7 Q. Now let's look at Jim
 8 MacDonald's response, Jim MacDonald from
 9 Synergy Partners R&D Solutions, who is the
 10 carcinogenicity expert consultant that
 11 Charles Wang reached out to after asking for
 12 clearance from Min Li to do so.
 13 He writes, "Charles, I'm afraid
 14 I can't be of much help in this case
 15 particularly on this time scale. NDMA (or
 16 dimethylnitrosamine) is a pretty well-known
 17 toxin and animal carcinogen."
 18 I'm going to stop there.
 19 Do you see where I'm reading?
 20 A. I do see what's written here.
 21 However, I do not know what this person is --
 22 or who this person is, rather, because I did
 23 not do any study on it.
 24 Q. You said you interviewed

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1 Charles Wang as part of your preparation for
 2 this deposition, correct?
 3 MR. BERNARDO: Object to the
 4 form of the question.
 5 THE WITNESS: That's incorrect.
 6 I never mentioned his name. I did say
 7 I read Dr. Wang's report instead.
 8 BY MR. SLATER:
 9 Q. Continuing in the e-mail a
 10 little further down from where I just read,
 11 Jim MacDonald states, "The body of evidence
 12 on this suggests pretty clearly that this is
 13 a likely human carcinogen at sufficient
 14 exposures. The argument that the company
 15 would have to make to keep this product on
 16 the market will be very difficult with this
 17 profile. I'm not exactly sure where one
 18 would begin given the very high levels you
 19 think they are seeing."
 20 And just to be clear, the "very
 21 high levels" he's referring to are what
 22 Charles Wang had said in the prior e-mail,
 23 around 30 parts per million.
 24 That was the level he quoted,

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1 correct?
 2 MR. BERNARDO: Object to the
 3 form of the question.
 4 THE WITNESS: I don't quite
 5 understand your question, because I
 6 don't see your quotation in this
 7 e-mail. I cannot see the English
 8 version, so I can only rely on the
 9 Chinese translation.
 10 BY MR. SLATER:
 11 Q. And in fact, 30 parts per
 12 million, which was the level quoted by
 13 Charles Wang in the prior e-mail that we went
 14 through, would be at the low end of what I
 15 showed you on that table in the DMF update
 16 that we went through, where I showed you
 17 those many results that went up close to
 18 200 parts per million and many over 100 parts
 19 per million.
 20 Remember we saw that?
 21 A. Yes, I did see the result of
 22 NDMA.
 23 Q. Jim MacDonald then says a
 24 little further down, "I expect this is not

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1 what they would want to hear but, unless
 2 there is a compelling reason to leave this
 3 product on the market (for example, only
 4 product available to treat a serious,
 5 life-threatening disease), I would expect the
 6 FDA would ask for a recall."
 7 And then a little further down
 8 he says, "These things are always very
 9 difficult to predict - but this is not a good
 10 position for this product in my view."
 11 Do you see that?
 12 A. I heard the translation, but I
 13 can't read English.
 14 Q. Going to the top of the page,
 15 Charles Wang wrote to Jim MacDonald a few
 16 weeks later, July 17, 2018, and said, "Hi
 17 Jim, You may have seen this." And it's a
 18 link to the announcement of the recall, I
 19 represent to you, and he says, "It is exactly
 20 like you expected, and I agreed with your
 21 call."
 22 You see that, correct?
 23 A. I don't know -- I don't know
 24 where it is in this document. I can't read

<p style="text-align: right;">Page 209</p> <p>1 English, but I heard the Chinese translation. 2 MR. SLATER: All right, Chris. 3 Let's go now -- take that down, and 4 let's go to ZHP "to whom it may 5 concern," which I believe is 6 ZHP00374340. Let's start with that 7 and show that to the witness. 8 (Whereupon, Exhibit Numbers 9 ZHP-465A and ZHP-465B were marked for 10 identification.) 11 BY MR. SLATER: 12 Q. This document states about 13 halfway down the first page, "This 14 information package, provided to Huahai's 15 customers who have purchased Valsartan DS 16 (CEP 2010-072), consists of the following 17 four parts: 18 "Background of the event; 19 "Root cause investigation; 20 "Risk assessment based on 21 toxicological evaluation; 22 "Recommended actions and future 23 plan." 24 And this would have been</p>	<p style="text-align: right;">Page 211</p> <p>1 And if we flip over to the next 2 page to the conclusion of that page in terms 3 of what customers of ZHP were being told -- 4 MR. SLATER: Let's go to 5 page 14. Please go to page 14. 6 MR. GEDDIS: This is page 14, 7 Adam. 8 MR. SLATER: Oh, okay. Now it 9 is. 10 BY MR. SLATER: 11 Q. Continuing, we see that ZHP was 12 advocating here for a limit of 31.2 parts per 13 million. It says, "For the maximum dose of 14 patients that take valsartan drug products at 15 the maximum daily dose of 320 milligrams for 16 one to ten years." 17 Do you see that? 18 MR. BERNARDO: Object to the 19 form of the question. 20 Can somebody put their phone on 21 mute? 22 MR. WILLIAMSON: I think, 23 Ms. Kapke, that's your microphone. 24 MR. SLATER: Yeah, I'm just</p>
<p style="text-align: right;">Page 210</p> <p>1 something that would have been sent to the 2 customers who were purchasing ZHP's 3 valsartan, correct? 4 A. Based on the translation, I 5 would like to think so. 6 MR. SLATER: Now, Chris, let's 7 go to -- now that we've seen this 8 document, I want to pull up a version 9 of it that was actually produced by 10 Teva, one of those customers who 11 received it, and it's 12 TEVA-MDL2875-00783229. 13 Q. And I can represent to you this 14 is the same document we just looked at. It 15 was the one that was produced by Teva as they 16 had received it. 17 MR. SLATER: And let's go, if 18 we could, to page 14 -- actually, page 19 13 out of 17. 20 Q. Looking now at page 13, there's 21 a heading towards the bottom of the page, 22 "Section 3.1.5, IARC Classification and 23 Rationale for Proposed Daily Limits Based on 24 Lifetime and One to Ten Years of Exposure."</p>	<p style="text-align: right;">Page 212</p> <p>1 going to clean this up. I'm going to 2 start over because we had a couple 3 little glitches there. 4 Q. So starting on page 13 where we 5 started, Section 3.1.5 is titled "IARC 6 Classification and Rationale for Proposed 7 Daily Limits Based on Lifetime and One to Ten 8 Years of Exposure." 9 And if we go over to the next 10 page, this section concludes with the 11 statement, "Therefore, the limit of NDMA in 12 valsartan drug products can be set at 13 31.2 parts per million for the maximum 14 dose" -- it gives a calculation -- "if 15 patients take valsartan drug products at the 16 maximum daily dose of 320 milligrams for one 17 to ten years." 18 So you can see that ZHP 19 included in this recommendation to its 20 customers, including Teva, a 31.2 parts per 21 million acceptable limit. 22 Do you see that? 23 MR. BERNARDO: Object to the 24 form of the question.</p>

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1 THE WITNESS: I heard the
2 Chinese translation. I cannot read
3 English here, but I did see the
4 numbers you mentioned in your
5 question.
6 As I said earlier, we looked at
7 the e-mails among Dr. Wang, Min Li,
8 and the so-called expert. I could
9 tell that they were in the process of
10 discussing the limit setting.
11 What we see here is only a
12 letter to our client. Once again, the
13 limit is not set by ZHP; rather, it's
14 set by FDA. That's why we needed to
15 bring all the information data to our
16 face-to-face meeting with FDA.
17 MR. SLATER: Let's go back to
18 the prior page, page 13. Beginning of
19 that section.
20 MR. BERNARDO: Adam, I'm sorry
21 to interrupt --
22 MR. GEDDIS: What page, Adam?
23 MR. SLATER: Page 13.
24 MR. BERNARDO: I thought she

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1 asked if there was a Chinese version,
2 maybe --
3 MR. SLATER: Yes, it's been
4 sitting in the exhibit folder.
5 MR. BERNARDO: Dr. Shao, would
6 you just remind Ms. Ge that she has
7 access to the Chinese version so she
8 can look at it if she'd like?
9 INTERPRETER SHAO: Could the
10 counsel remind the witness of the
11 exhibit number?
12 MR. SLATER: Chris, what's the
13 exhibit number?
14 MR. GEDDIS: 466.
15 THE WITNESS: I can't find this
16 document.
17 MR. GEDDIS: You might have to
18 refresh the window.
19 MR. SLATER: Why don't you do
20 that. Let's do whatever we need to do
21 to get it for her.
22 THE WITNESS: Well, it seems
23 like I found the link, I clicked, and
24 they were asking for password. When I

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1 tried to click on the link, they were
2 asking for a password.
3 Now I see. What's the number
4 again?
5 MR. SLATER: 466. 466B.
6 (Whereupon, Exhibit Numbers
7 ZHP-466A and ZHP-466B were marked for
8 identification.)
9 THE WITNESS: Hold on. Let me
10 download this document first.
11 Now I can open it.
12 BY MR. SLATER:
13 Q. Can't open it, or can?
14 A. I am able to open it.
15 Q. Great. Go to page 13, please.
16 A. I just want to confirm whether
17 this document is a machine-translated file --
18 Q. Yes.
19 A. -- because looking at the
20 format, it looks weird.
21 Q. Yes.
22 Looking at page 13, the last
23 heading that we were reading underneath, in
24 terms of the method that was followed to

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1 calculate that 31.2 parts per million, this
2 states, "Per ZHP, in IARC (International
3 Agency for Research on Cancer, a World Health
4 Organization organization) classification,
5 NDMA is classified as Class 2A. Hence, the
6 daily intake of NDMA can be controlled at or
7 below the acceptable limit (appropriate
8 threshold of toxicological concern)," and it
9 gives that number for lifetime exposure
10 "according to ICH guideline M7(R1)." So that
11 was part of the rationale for this statement.
12 Do you see that?
13 A. Well, the Chinese translation
14 of this document is all scrambled and
15 illegible. But I did hear the Chinese
16 translation.
17 MR. SLATER: Now, I just want
18 to flip back for one moment to
19 page 12.
20 Q. At the bottom of the page
21 you'll see a table, and under the table it
22 refers to a World Health Organization report.
23 A table from the report is shown above, and
24 then just at the bottom of the page there's a

<p>Page 217</p> <p>1 citation to that report from the World Health 2 Organization in 2002.</p> <p>3 Do you see that at the bottom 4 of that page, page 12?</p> <p>5 A. Yeah, I see that. However, the 6 translation is really weird here.</p> <p>7 MR. SLATER: Let's go now -- 8 let's take that document down, and 9 let's go to TEVA-MDL2875-00540386, 10 please.</p> <p>11 (Whereupon, Exhibit Number 12 ZHP-467A and ZHP-467B were marked for 13 identification.)</p> <p>14 BY MR. SLATER:</p> <p>15 Q. Starting right at the top of 16 the page, there's an e-mail from Raphael 17 Nudelman, and we can see who he is down below 18 in the signature line; he's a Ph.D., ERT 19 director of chemical and computational 20 toxicology at Teva.</p> <p>21 And he's writing to somebody at 22 Teva regarding "Urgent Valsartan Safety 23 Assessment Request." 24 Do you see what I'm talking</p>	<p>Page 219</p> <p>1 heard the translation.</p> <p>2 BY MR. SLATER:</p> <p>3 Q. A little further down it says, 4 "The fact that NDMA was present in Valsartan 5 since 2012 cannot be used as a justification 6 for its safety. Carcinogenicity can still 7 develop in patients who received this drug 8 containing NDMA in the past 6 years."</p> <p>9 So you see that Dr. Nudelman 10 from Teva thought that there is an increased 11 risk of cancer to people who took valsartan 12 manufactured with ZHP's contaminated API.</p> <p>13 You see that, right?</p> <p>14 MR. BERNARDO: Object to the 15 form of the question.</p> <p>16 MS. LANGTON: Join.</p> <p>17 THE WITNESS: Well, I just 18 heard the interpreter's Chinese 19 translation even though I could not 20 tell what's written here.</p> <p>21 My understanding to the e-mail 22 is that this is an internal 23 communication within Teva as to who 24 this person is. Even though it has</p>
<p>Page 218</p> <p>1 about? Do you see the e-mail in front of 2 you?</p> <p>3 MR. BERNARDO: Object to the 4 form of the question.</p> <p>5 THE WITNESS: I see this e-mail 6 because I heard the Chinese 7 translation. I can tell this is an 8 internal communication within Teva.</p> <p>9 BY MR. SLATER:</p> <p>10 Q. Looking now at the second 11 paragraph, Dr. Nudelman says, "I indeed had 12 considerable reservations to the Huahai 13 assessment which concluded with a large 14 difference in the overall permitted daily 15 exposure of NDMA. Huahai's understanding of 16 the IARC categories, their incorrect use of 17 the ICH M7 categories, and incorrect use of 18 the LTL, brings me to the conclusion that 19 their assessment was totally unacceptable." 20 Do you see that?</p> <p>21 MR. BERNARDO: Object to the 22 form of the question.</p> <p>23 THE WITNESS: Well, the 24 interpreter kept going, so I just</p>	<p>Page 220</p> <p>1 some description here, it's still 2 unclear to me.</p> <p>3 Furthermore, I do not know 4 where you could find the supportive 5 data in human to support his statement 6 about a carcinogen. I have talked 7 with quite a few experts, and they 8 were telling me there was not data in 9 humans to support that it was a human 10 carcinogen.</p> <p>11 Since this is merely an 12 internal communication within Teva, I 13 would not make any comment on the 14 content of this e-mail.</p> <p>15 BY MR. SLATER:</p> <p>16 Q. The so-called experts you spoke 17 to were hired and paid by ZHP. Do I 18 understand that correctly?</p> <p>19 A. I don't think your 20 interpretation is correct.</p> <p>21 Q. Looking at the e-mail a little 22 further -- I'll start over.</p> <p>23 Looking a little further down, 24 two more paragraphs, Dr. Nudelman, the</p>

<p style="text-align: right;">Page 221</p> <p>1 director of chemical and computational 2 toxicology at Teva, says, "I fully agree that 3 hypertension treatment is chronic and the 4 less-than-lifetime (LTL) argument cannot be 5 used in this case." 6 So that would disagree with the 7 idea that you could have different levels 8 based on the assumption that somebody would 9 use the drug for a short period of time. 10 Do you understand that? 11 MR. BERNARDO: Object to the 12 form of the question. 13 MS. LANGTON: Join. 14 THE WITNESS: Through the 15 Chinese translation, I understand what 16 you are talking about. 17 My understanding of this 18 paragraph is that they were still in 19 discussion on the limit setting for 20 NDMA in valsartan, as to how high the 21 limit would be, and it's up to the FDA 22 and EU's regulatory authorities to 23 set. 24 Before they set such limits,</p>	<p style="text-align: right;">Page 223</p> <p>1 question is very weird, because ZHP 2 never tried to sell more pills and 3 make more money. 4 That is why, once we learned 5 about the NDMA in valsartan, we 6 immediately approached FDA and EU. We 7 never hoped that we would sell more 8 valsartan. 9 As for the e-mails that we just 10 looked at back and forth among those 11 people, we were trying to get help 12 from experts and get their advice, 13 information, and data so that we could 14 take all these to the FDA for 15 communication. 16 We would not take any action 17 until those actions would be approved 18 by FDA. Whatever work we conduct has 19 to be conformed to FDA's requirement. 20 MR. SLATER: Let's go now to 21 TEVA-00068399. 22 MR. BERNARDO: Break, Adam? 23 MR. SLATER: I'd like to finish 24 this line with this document, if I</p>
<p style="text-align: right;">Page 222</p> <p>1 they were still talking about it 2 themselves based on their knowledge 3 and understanding. That's quite 4 common for such complications. 5 My understanding is that it is 6 up for the EU's regulatory authority 7 to set the limit in Europe. If it's 8 in the US, then it is up to FDA to 9 approve such limits. 10 Before they approve such 11 limits, everyone was still discussing 12 among themselves based on their 13 knowledge and understanding, but 14 eventually whatever limit approved by 15 FDA would be the final limit. 16 BY MR. SLATER: 17 Q. If ZHP advocated for 18 unreasonably high levels in the hope of being 19 able to sell more of the pills and make more 20 money, that would have been completely 21 inappropriate and wrong, right? 22 MR. BERNARDO: Object to the 23 form of the question. 24 THE WITNESS: I believe your</p>	<p style="text-align: right;">Page 224</p> <p>1 could, please. 2 MR. BERNARDO: Sure. 3 (Whereupon, Exhibit Numbers 4 ZHP-468A and ZHP-468B were marked for 5 identification.) 6 BY MR. SLATER: 7 Q. This is the toxicological 8 assessment for NDMA prepared by Dr. Nudelman 9 at Teva. And you can see towards the bottom 10 is the Assessment, where he says in the 11 middle of that section, "The ICH M7(R1) 12 guideline for mutagenic impurities considers 13 compounds which are mutagenic carcinogens as 14 Class 1 substances that need to be controlled 15 according to compound-specific accepted 16 limits. The M7 guideline explains that this 17 compound-specific accepted limit is linearly 18 extrapolated from the TD50 value." 19 And then in the next line he 20 states, "For the highest dose of Valsartan 21 (320 milligrams per day) the limit for NDMA 22 calculates to 0.57 parts per million." 23 Do you see that? 24 MR. BERNARDO: Object to the</p>

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1 form of the question.
2 THE WITNESS: I heard the
3 translation, and I also saw some of
4 the numbers.
5 BY MR. SLATER:
6 Q. When you were being prepared to
7 testify in this deposition on the increased
8 risk questions, you were given some
9 information and spoke to paid experts for
10 ZHP, but you weren't shown these documents
11 that I'm showing you now, right?
12 MR. BERNARDO: Object to the
13 form of the question.
14 BY MR. SLATER:
15 Q. I'll ask it differently.
16 When you were being prepared
17 for this deposition, were you shown these
18 documents where they reacted to the positions
19 that ZHP took at the time in 2018?
20 I just want to know, were you
21 given this information to help prepare
22 yourself for this deposition?
23 MR. BERNARDO: Object to the
24 form of the question.

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1 THE WITNESS: My first point is
2 I did not read any of the internal
3 complication documents within Teva.
4 My second point is that,
5 indeed, the -- my second point is that
6 for this preparation of the
7 deposition, I did a lot of preparation
8 work.
9 My third point is that I don't
10 believe I need to review the internal
11 communication documents within Teva,
12 because at that time in setting the
13 limits -- or acceptable limit, that
14 is, for the NDMA in valsartan, people
15 were discussing with themselves. They
16 were also consulting with external
17 experts.
18 But eventually it's not up to
19 those enterprises to set the limit.
20 Whatever limit has to be approved by
21 FDA, which they did. As you can see
22 later, FDA and EU set the limit and
23 made it public in their public
24 announcement.

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1 So for us, we have to follow
2 FDA or EU's GMP official requirement
3 in order to conduct our work.
4 To me, such internal technical
5 communication is very normal. I don't
6 believe I need to review any documents
7 within Teva. All I need to do is to
8 follow FDA for the requirements they
9 set.
10 MR. SLATER: Rick, did you say
11 you wanted to take a break for a
12 couple minutes?
13 MR. BERNARDO: Yes, please.
14 MR. SLATER: Okay.
15 THE VIDEOGRAPHER: The time
16 right now is 10:48 a.m. We're off the
17 record.
18 (Whereupon, a recess was
19 taken.)
20 THE VIDEOGRAPHER: The time
21 right now is 11:02 a.m. We're back on
22 the record.
23 MR. SLATER: All right. Chris,
24 can we put the information package to

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1 the customers back up and go to
2 page 12, where we were before?
3 BY MR. SLATER:
4 Q. You see the table that is shown
5 there, and it says, "According to a World
6 Health Organization report, a table of the
7 report is shown above. A reasonable
8 worst-case estimation of daily intake of NDMA
9 from different sources by general population
10 at different age groups are listed in the
11 table above." And then it gives an example,
12 and it cites to a World Health Organization
13 study from 2002.
14 Have you actually looked at
15 that World Health Organization document that
16 is cited by ZHP in this information packet to
17 its customers?
18 A. Are you asking me whether I
19 reviewed this document generated by Huahai,
20 or I reviewed the WHO report cited by this
21 document?
22 Q. The WHO report from 2002.
23 A. No, not for this one.
24 Q. Okay. Let's go now to the

<p style="text-align: right;">Page 229</p> <p>1 World Health Organization document, ZHP-321. 2 (Whereupon, Exhibit Number 3 ZHP-321, previously marked for 4 identification.) 5 BY MR. SLATER: 6 Q. This is the World Health 7 Organization report from 2002 titled 8 "N-nitrosodimethylamine," and that is what is 9 cited in that information packet to ZHP's 10 customers. 11 And what I'd like to do now is 12 turn to page 13, where we can then see that 13 it's the same table that we just saw in the 14 information packet to the customers. 15 There it is. 16 Do you see that that's the same 17 table, "Reasonable worst-case estimates of 18 daily intake of NDMA"? 19 A. I see the table, and I also see 20 numbers in this table, but I'm not sure I 21 understand what it says in that table. 22 MR. SLATER: Let's go now to 23 page 23. Actually, let's go to 24 page 22 to start.</p>	<p style="text-align: right;">Page 231</p> <p>1 article and the letter to our clients. 2 However, I do not read English, so I'm 3 not sure whether the paragraph you 4 just read was included in the letter 5 to the customers. 6 Seems to me that they are just 7 referring to experiments, laboratory 8 animals, regarding NDMA. So I'm not 9 sure whether this paragraph was 10 included in that letter. After all, I 11 cannot read English. 12 MR. SLATER: Let's go back to 13 page 21. 14 Q. This shows that in section 9, 15 "Effects on Humans," that, in fact, there was 16 analysis of studies having to do with human 17 intake of NDMA. 18 So you had just wondered if 19 human studies were considered, and I'm 20 showing that to you. 21 Do you see that? 22 MR. BERNARDO: Object to the 23 form of the question. 24 Is there a translated version</p>
<p style="text-align: right;">Page 230</p> <p>1 Q. You can see on page 22 in the 2 bottom right is a heading called 3 "Carcinogenicity." 4 MR. SLATER: And let's now 5 continue over to the next page, to the 6 end of that section at the top 7 right-hand corner of page 23. 8 Q. And this document states, 9 "Therefore, owing to the considerable 10 evidence of carcinogenicity of NDMA in 11 laboratory species, evidence of direct 12 interaction with DNA consistent with tumour 13 formation, and the apparent lack of 14 qualitative species-specific differences in 15 the metabolism of this substance, NDMA is 16 highly likely to be carcinogenic to humans." 17 That language I've just read 18 was not included in what was sent in the 19 information packet to ZHP's customers. Only 20 that table that we showed a few pages earlier 21 was shown to them, correct? 22 MR. BERNARDO: Object to the 23 form of the question. 24 THE WITNESS: I saw both this</p>	<p style="text-align: right;">Page 232</p> <p>1 of this? 2 THE WITNESS: I cannot read 3 this article because they are in 4 English. I can figure the number 9, 5 but I'm not sure whether that's 6 referring to the effects on human. 7 BY MR. SLATER: 8 Q. There is a Chinese translation, 9 as with every one of the documents that we've 10 used in this deposition. So you've always 11 had the opportunity to access that in the 12 same place. 13 MR. BERNARDO: I'll note for 14 the record that with respect to the 15 machine, the translator has observed 16 that most, if not all, of the Chinese 17 translations are unintelligible and 18 confusing. 19 MR. SLATER: I'm not going to 20 argue the point with you, Counsel. 21 MR. BERNARDO: I'm not asking 22 you to. 23 MR. SLATER: You asked if there 24 was a translation; I said yes.</p>

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1 MR. BERNARDO: You said more
2 than that.
3 BY MR. SLATER:
4 Q. In preparing for this
5 deposition, am I correct you were not aware
6 that ZHP had in its possession this study,
7 which concluded that NDMA is highly likely to
8 be carcinogenic to humans? Yes or no.
9 MR. BERNARDO: Object to the
10 form of the question.
11 THE WITNESS: That's incorrect.
12 BY MR. SLATER:
13 Q. So you did review this report?
14 A. No. Because what's written
15 here is all in English, I can't understand
16 it.
17 Q. It's a very simple question.
18 Did you have this report
19 provided to you, either in English or in
20 Mandarin, as part of your preparation for
21 this deposition? Yes or no.
22 MR. BERNARDO: Object to the
23 form of the question.
24 THE WITNESS: During the

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1 preparation, I have reviewed many
2 documents.
3 And I don't think I need to
4 review this document because in terms
5 of preparation, what I have done is
6 sufficient.
7 BY MR. SLATER:
8 Q. It was sufficient for you to be
9 prepared by paid experts for ZHP who were
10 paid to dispute the increased risk, as
11 opposed to reading a report from the World
12 Health Organization indicating that NDMA is
13 highly likely to be carcinogenic to humans?
14 Is that what you're telling me? Yes or no.
15 MR. BERNARDO: Object to the
16 form of the question.
17 THE WITNESS: That's totally
18 incorrect.
19 BY MR. SLATER:
20 Q. Were you aware when you were
21 being prepared for this deposition that this
22 World Health Organization report from 2002
23 was in ZHP's files? Yes or no.
24 A. I didn't verify that. However,

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1 even after they mentioned this report, I read
2 the conclusion from IARC. So I don't think I
3 need to read many documents, because IARC's
4 conclusion is very clear to me.
5 Q. The IARC conclusion that NDMA
6 is a probable human carcinogen, that's what
7 you're referring to, correct?
8 A. In IARC's conclusion, it was
9 written very clearly that out of practical
10 concerns, even though there was no human
11 data, out of the practical concern for the
12 high-dose scenario, NDMA is regarded as a
13 probable human carcinogen.
14 Q. The IARC monograph actually
15 doesn't say anything about high dose; it just
16 says it's a probable human carcinogen,
17 actually, right?
18 MR. BERNARDO: Object to the
19 form of the question.
20 THE WITNESS: That's incorrect.
21 IARC did mention that so far they
22 still don't have any human data. They
23 do have, however, some data of
24 high-dose animals.

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1 BY MR. SLATER:
2 Q. Are you aware that it would be
3 unethical to study the effects of NDMA on
4 humans because of the strong evidence of
5 carcinogenicity? Yes or no, are you aware of
6 that?
7 MR. BERNARDO: Object to the
8 form of the question.
9 THE WITNESS: I don't get your
10 question. Are you referring to
11 imposing NDMA onto human beings?
12 BY MR. SLATER:
13 Q. Are you aware that it would be
14 unethical to deliberately give NDMA to humans
15 in order to study whether and to what extent
16 it would cause cancer in humans because of
17 the strong evidence of it being a mutagenic,
18 genotoxic carcinogen?
19 Are you aware of that? Yes or
20 no.
21 MR. BERNARDO: Object to the
22 form of the question.
23 THE WITNESS: As I told you
24 before, I am not a toxicologist nor a

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1 pharmacologist. All I have to do is
2 to rely on the agencies, well-known
3 agencies and experts.
4 As for the human data, I don't
5 know how they would have conducted
6 their analysis, whether they used any
7 human data or not.
8 However, I also don't know how
9 they did not -- how they conducted
10 statistical analysis on that. I
11 didn't realize that I have to prepare
12 to such details for this deposition.
13 MR. SLATER: I have no further
14 questions at this time. I'll hand the
15 witness -- pass the witness, I
16 guess -- to defense counsel.
17 MR. BERNARDO: Just give me a
18 couple minutes.
19 THE VIDEOGRAPHER: The time
20 right now is 11:26 a.m. We're off the
21 record.
22 (Whereupon, a recess was
23 taken.)
24 THE VIDEOGRAPHER: The time

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1 right now is 11:32 a.m. We're back on
2 the record.
3 EXAMINATION
4 BY MR. BERNARDO:
5 Q. Good morning, Ms. Ge. We
6 obviously know each other, but let me
7 introduce myself for the record. I'm Richard
8 Bernardo. I'm counsel for ZHP.
9 Thank you for taking the time
10 to talk with Mr. Slater and me as well. I
11 know you had to travel a distance to
12 participate in this deposition.
13 Ms. Ge, I just want to talk to
14 you a little bit about your background and
15 just make sure we clarify what might be some
16 confusion through some earlier questions.
17 Tell the jury what your
18 education is, Ms. Ge.
19 A. Of course. Good morning,
20 everyone. My name is Jucai Ge. I am
21 currently the quality assurance director for
22 API in ZHP.
23 As for my educational
24 background, in 2002 I graduated from Tianjin

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1 Institute of Technology with a major in
2 pharmacology, and I joined ZHP after there,
3 after then, after that time. I have been
4 around ZHP ever since.
5 Q. Thank you, Ms. Ge.
6 And what year did you graduate
7 with a major in pharmacology?
8 A. 2000.
9 Q. And so you've been at ZHP since
10 approximately 2000?
11 A. That is correct. Time flies.
12 I feel that as if yesterday, you know, I was
13 still on campus, and suddenly more than two
14 decades have already passed.
15 Q. 22 years is a long time.
16 Ms. Ge, would you help the jury
17 understand just briefly what a quality
18 assurance director does? What are your
19 responsibilities?
20 A. As a director of quality
21 assurance, in general, I'm in charge of the
22 construction or establishment, maintenance of
23 the quality system, work with any GMP
24 inspections.

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1 Also, right now I am in charge
2 of the supplier qualification.
3 At the same time, I'm also in
4 charge of setting up the quality system for
5 one of the subsidiary companies of ZHP.
6 Q. So 22 years at ZHP, Ms. Ge.
7 Fair to say you like working at ZHP?
8 MR. SLATER: Objection.
9 You can answer.
10 THE WITNESS: Of course.
11 Otherwise, who would stay in the same
12 company for over 20 years?
13 The reason why I've been
14 working with ZHP is because I like the
15 working environment here, which is
16 very good. Everyone around me is very
17 nice, they work hard, and they've been
18 very careful and diligent.
19 Also, it's -- basically, a lot
20 of people who either joined the
21 company at the same time as I did or
22 joined the company before I did are
23 even still with ZHP, so they're being
24 with ZHP for over 20 years or close to

<p>Page 241</p> <p>1 20 years. So after all, the work 2 environment is very good here. 3 BY MR. BERNARDO: 4 Q. Do you feel you also work hard 5 and diligently, given your responsibilities 6 as the director of quality assurance? 7 MR. SLATER: Objection. 8 You can answer. 9 THE WITNESS: Of course. As I 10 said, in such a working environment, 11 everyone is working hard and seriously 12 and diligently. We all work together 13 trying to fulfill our responsibilities. 14 That is just definitely 15 necessary because, after all, ZHP 16 doesn't belong to one person; it 17 belongs to all of us. That's why I 18 think for this working environment, 19 everyone is working hard. 20 BY MR. BERNARDO: 21 Q. Mr. Slater asked you a number 22 of questions suggesting that ZHP knew that 23 NDMA formed in valsartan as early as the 24 summer of 2017, but didn't disclose that</p>	<p>Page 243</p> <p>1 right analytical method, how could you 2 identify NDMA in a test. 3 Q. What about Jinsheng Lin, the 4 author of the document that you spent a fair 5 amount of time discussing with Mr. Slater? 6 Do you have an understanding whether he in 7 particular knew that NDMA formed in valsartan 8 in 2017? 9 MR. SLATER: Objection. 10 You can answer. 11 THE WITNESS: That is 12 impossible, because I asked him and he 13 told me that at that time he was not 14 aware of the existence of NDMA in 15 valsartan. 16 He only -- his understanding of 17 the impurity was only restricted to 18 the knowledge he got from the patent 19 that was attached to that e-mail. At 20 that time, he was not in charge of 21 this valsartan product. 22 BY MR. BERNARDO: 23 Q. Let me break that down a little 24 bit, Ms. Ge, in following up on some of</p>
<p>Page 242</p> <p>1 information. 2 Do you recall those questions? 3 MR. SLATER: Objection. 4 You can answer. 5 THE WITNESS: We had a lot of 6 communications on this line of 7 questions. I don't know whether he 8 got my feedback. 9 To the best of my knowledge and 10 based on my 20 years of experience in 11 ZHP, I can respond very responsively 12 that before July 2017, or even before 13 June 2018 when Novartis suggested to 14 us that there might be NDMA in 15 valsartan, nobody at ZHP knew there 16 was NDMA in valsartan. I just want to 17 clarify that. 18 BY MR. BERNARDO: 19 Q. How do you know that, Ms. Ge? 20 A. That is because before 21 June 2018 there was not an analytical method 22 that would identify NDMA in valsartan. 23 That is one of the most 24 important reasons. If you don't have the</p>	<p>Page 244</p> <p>1 Mr. Slater's questions about Mr. Lin's 2 knowledge. 3 So before he wrote the memo, 4 what is your knowledge of the information 5 that was available regarding NDMA, if 6 anything? 7 A. I communicated with him and had 8 a discussion with him regarding this topic. 9 According to him, in general, 10 NDMA was a common, natural N-nitroso 11 compound. It's a very common compound. And 12 he was not aware that NDMA was in valsartan. 13 That was his general knowledge at that time. 14 Q. Thank you. 15 You talked quite a bit in your 16 testimony about a patent application. 17 Do you remember that? 18 A. Well, yes. 19 Q. And do you have -- and as I'm 20 recalling your testimony, it was that Mr. Lin 21 had this patent application before he wrote 22 his July 27, 2017 memo that you discussed, is 23 that correct? 24 MR. SLATER: Objection.</p>

<p style="text-align: right;">Page 245</p> <p>1 You can answer.</p> <p>2 THE WITNESS: I communicated</p> <p>3 with Jinsheng Lin on this topic, and I</p> <p>4 also provided my response, being the</p> <p>5 prior testimony.</p> <p>6 At that time when he was</p> <p>7 writing the e-mail, either it was</p> <p>8 several hours prior to that or</p> <p>9 sometime on the same day. Whichever</p> <p>10 the case, he could not recall, he was</p> <p>11 trying to make a comparison about in</p> <p>12 toxicology; therefore, he conducted an</p> <p>13 online search and found this patent.</p> <p>14 BY MR. BERNARDO:</p> <p>15 Q. And by "this patent," Ms. Ge,</p> <p>16 you're referring to the one that he attached</p> <p>17 to the July 27, 2017 memo?</p> <p>18 A. That is correct.</p> <p>19 Q. So he did some online research,</p> <p>20 found this patent application that he</p> <p>21 discussed.</p> <p>22 Let's talk about that. Does</p> <p>23 the patent application anywhere discuss NDMA?</p> <p>24 MR. SLATER: Objection.</p>	<p style="text-align: right;">Page 247</p> <p>1 thousands, of nitroso compounds in the world.</p> <p>2 However, this patent only mentioned</p> <p>3 Impurity K.</p> <p>4 Q. I want to go back to the</p> <p>5 July 27, 2017 memo.</p> <p>6 Now, you testified, Ms. Ge,</p> <p>7 that you took steps to investigate what</p> <p>8 Dr. Lin was trying to communicate in this</p> <p>9 memo, is that correct?</p> <p>10 MR. SLATER: Objection.</p> <p>11 You can answer.</p> <p>12 INTERPRETER SHAO: The</p> <p>13 interpreter is asked to repeat the</p> <p>14 rendition.</p> <p>15 THE WITNESS: I don't quite</p> <p>16 understand this question. Are you</p> <p>17 referring to the investigation on</p> <p>18 Impurity K?</p> <p>19 BY MR. BERNARDO:</p> <p>20 Q. No. Thank you for asking me to</p> <p>21 clarify if you don't understand, Ms. Ge.</p> <p>22 I just want to understand what</p> <p>23 you personally did to try and get an</p> <p>24 understanding of what the memo was</p>
<p style="text-align: right;">Page 246</p> <p>1 You can answer.</p> <p>2 THE WITNESS: NDMA was not</p> <p>3 discussed from cover to cover in the</p> <p>4 entirety of this patent.</p> <p>5 BY MR. BERNARDO:</p> <p>6 Q. So what does the patent</p> <p>7 application discuss, Ms. Ge?</p> <p>8 A. That patent discussed</p> <p>9 Impurity K in valsartan.</p> <p>10 Q. And what is Impurity K?</p> <p>11 A. Impurity K is also one of the</p> <p>12 N-nitroso compounds.</p> <p>13 Q. Do you recall that Mr. Slater</p> <p>14 raised the patent referred to nitroso</p> <p>15 compounds, plural?</p> <p>16 Do you recall that?</p> <p>17 A. Yes, he did. However, I also</p> <p>18 told him that Impurity K is one of the</p> <p>19 N-nitroso compounds.</p> <p>20 Q. Now, do you have an</p> <p>21 understanding, Ms. Ge, about how many known</p> <p>22 nitroso compounds there are?</p> <p>23 A. As I told Mr. Slater this</p> <p>24 morning, there were thousands, if not tens of</p>	<p style="text-align: right;">Page 248</p> <p>1 communicating.</p> <p>2 A. After I read this -- oh, by the</p> <p>3 way, I now understand your question.</p> <p>4 After I read this e-mail, I got</p> <p>5 very confused because this e-mail was written</p> <p>6 in such a lousy way.</p> <p>7 In order to correctly</p> <p>8 understand what this e-mail was talking</p> <p>9 about, I did a lot of work, including reading</p> <p>10 the whole entirety of this e-mail as well as</p> <p>11 the attached patent.</p> <p>12 I also approached relative</p> <p>13 people, including Jinsheng Lin and Peng Dong,</p> <p>14 for communication.</p> <p>15 Afterwards, I read the entirety</p> <p>16 of the e-mail again. Then finally I got what</p> <p>17 it was communicating about. After all, this</p> <p>18 e-mail was written in such a poor way.</p> <p>19 Q. And after you took the steps</p> <p>20 you just described, Ms. Ge, tell the jury</p> <p>21 what your understanding of what was being</p> <p>22 communicated in the memo.</p> <p>23 A. After communication with other</p> <p>24 people, as well as my hard work, I developed</p>

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1 an understanding of the communication, being
2 this e-mail.
3 As seen in the title, it was
4 about N-nitroso impurity found in the
5 technical improvement of irbesartan, and he
6 was trying to conduct a structural and a
7 toxicological comparison between that
8 impurity and the Impurity K in valsartan as
9 well as NDMA, with NDMA being one of the
10 naturally occurring N-nitroso compounds.
11 That's why he included that impurity,
12 Impurity K, and NDMA in his memo.
13 However, the whole e-mail was
14 about the analysis of the impurity found in
15 the technical improvement of irbesartan.
16 Q. The sentence that Mr. Slater
17 read you -- and you can pull it up if you
18 want to refresh your recollection -- says
19 that what was occurring in irbesartan was
20 similar to the NDMA that occurs in valsartan
21 when quenched with sodium nitrite.
22 Do you recall that sentence?
23 A. As for that sentence -- hold
24 on. Let me read it.

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1 I recall it. I see it now.
2 Q. Thank you.
3 Can you help the jury
4 understand, Ms. Ge, how to reconcile that
5 sentence with the testimony you've given
6 today and yesterday about your understanding
7 of the overall document?
8 MR. SLATER: Objection.
9 You can answer.
10 THE WITNESS: Yes, I can.
11 For the entirety of this
12 e-mail, it was talking about this
13 N-nitroso compound impurity found in
14 the technical improvement of
15 irbesartan.
16 However, this e-mail was
17 written in such a lousy way, so in
18 terms of the discussion on the
19 structure, it was very confusing.
20 At that time he was only trying
21 to make a comparison in structure;
22 therefore, he was trying to find
23 something, and he came across this
24 patent which talked about Impurity K

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1 when it was generated by quenching
2 with sodium nitrite of valsartan. And
3 the patent did not mention NDMA at
4 all.
5 When he was trying to make this
6 structural and toxicological
7 comparison between the impurity found
8 in irbesartan and Impurity K, he also
9 included NDMA because all three were
10 in the category of N-nitroso
11 compounds.
12 When he was trying to make this
13 comparison of the nitroso compounds,
14 he actually was trying to compare with
15 the Impurity K found in valsartan
16 mentioned by this patent. He included
17 NDMA in the toxicological comparison.
18 That is because NDMA is a very common
19 compound.
20 After all, none of us had the
21 background of toxicology or
22 pharmacology, so it's easier for us to
23 understand why he included NDMA in the
24 comparison. But at that time, he was

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1 not aware of the existence of NDMA in
2 valsartan.
3 This e-mail was written in such
4 a lousy way, so when all the
5 paragraphs were put together, the
6 whole e-mail was very confusing.
7 BY MR. BERNARDO:
8 Q. I want to go back to
9 Impurity K. I think you testified that is a
10 nitroso compound, correct?
11 A. That is correct.
12 Q. And that patent application
13 that Mr. Lin attached to his July 27, 2017
14 memo claims that Impurity K forms in
15 valsartan, right?
16 A. That is correct.
17 Q. And at the end of the memo,
18 Mr. Lin says that the company should pay
19 attention to that issue, Impurity K forming
20 in valsartan, correct?
21 MR. SLATER: Objection.
22 You can answer.
23 THE WITNESS: That is correct.
24 ///

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1 BY MR. BERNARDO:
 2 Q. And do you, Ms. Ge, have an
 3 understanding of whether the company, in
 4 fact, paid attention to that issue?
 5 MR. SLATER: Objection.
 6 You can answer.
 7 THE WITNESS: Yes, the company
 8 did pay attention.
 9 BY MR. BERNARDO:
 10 Q. Explain to the jury how the
 11 company paid attention.
 12 MR. SLATER: Objection.
 13 You can answer.
 14 THE WITNESS: I communicated
 15 with Dr. Lin. According to him, LC-MS
 16 was used in the analytics and the
 17 verification, and the result was that
 18 there was no Impurity K found in
 19 valsartan. This result was delivered
 20 to the technical department at
 21 Chuannan site.
 22 BY MR. BERNARDO:
 23 Q. I want to circle back, Ms. Ge,
 24 to the beginning of this discussion we just

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1 had, all the way back to plaintiffs'
 2 allegation that ZHP knew about NDMA in 2017
 3 and hid it and didn't do anything about it.
 4 In light of the discussion we
 5 just had the last few minutes, do those
 6 allegations even make sense to you?
 7 MR. SLATER: Objection.
 8 You can answer.
 9 THE WITNESS: They make no
 10 sense to me at all. I already
 11 testified in the prior statement that
 12 before June 2018, nobody in ZHP knew
 13 about the existence of NDMA in our
 14 valsartan.
 15 And I also told everyone that
 16 one of the most important reasons is
 17 that we were lacking a method to
 18 identify NDMA.
 19 BY MR. BERNARDO:
 20 Q. I want to switch gears to the
 21 FDA correspondence that Mr. Slater discussed
 22 with you.
 23 Do you recall that
 24 correspondence? And you can pull it up, but

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1 I just want to talk generally about it.
 2 A. In general, I recall the
 3 correspondence.
 4 Q. So in that correspondence, do
 5 you recall FDA noted a number of
 6 deficiencies?
 7 MR. SLATER: Objection.
 8 You can answer.
 9 THE WITNESS: In the warning
 10 letter, they noted two deficiencies.
 11 BY MR. BERNARDO:
 12 Q. And my question, Ms. Ge, is,
 13 are those letters that you discussed with
 14 Mr. Slater in your earlier testimony the end
 15 of the story, or did ZHP continue to work
 16 with FDA with respect to the issues discussed
 17 in the warning letter?
 18 MR. SLATER: Objection.
 19 You can answer.
 20 THE WITNESS: I stated in my
 21 prior testimony, after we received
 22 this warning letter from FDA, we were
 23 very serious and careful in response.
 24 It took us several years back and

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1 forth with the FDA for the
 2 communication.
 3 We also gathered a lot of
 4 manpower and relative departments for
 5 the response in order to work with
 6 FDA. We also did a lot of corrections
 7 and improvements accordingly.
 8 Eventually FDA issued a report
 9 stating that we are -- or we were at
 10 the time of the report in compliance
 11 with cGMP.
 12 BY MR. BERNARDO:
 13 Q. You stole my later question,
 14 Ms. Ge. We'll get there.
 15 Before we do, so several years
 16 you worked with the FDA. Did you provide
 17 them additional information and support of
 18 ZHP's position regarding its compliance with
 19 GMP?
 20 MR. SLATER: Objection.
 21 You can answer.
 22 THE WITNESS: Yes, we did. In
 23 both the response to their warning
 24 letter and our communication with FDA,

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1 we had been communicating with them
 2 our position that we had always been
 3 in compliance with GMP.
 4 BY MR. BERNARDO:
 5 Q. And in addition to providing
 6 them communication, did you meet with FDA?
 7 MR. SLATER: Objection.
 8 You can answer.
 9 THE WITNESS: To the best of my
 10 knowledge, we did.
 11 BY MR. BERNARDO:
 12 Q. And was there ultimately any
 13 kind of an inspection to see if the issues
 14 that they raised were addressed or if they
 15 would agree with ZHP's position?
 16 MR. SLATER: Objection.
 17 You can answer.
 18 THE WITNESS: After receiving
 19 the warning letter, we responded to
 20 the warning letter. We continued to
 21 communicate with them.
 22 So FDA arranged an on-site
 23 inspection. Afterwards they issued an
 24 EIA report stating that we were in

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1 compliance with GMP.
 2 BY MR. BERNARDO:
 3 Q. Ms. Ge, I'd like to show you
 4 what's been marked as Defense Exhibit 1A,
 5 which is the English version, and 1B which is
 6 the Chinese version.
 7 (Whereupon, Exhibit Number
 8 Defense 1A and Defense 1B were marked
 9 for identification.)
 10 THE WITNESS: Hold on. Let me
 11 find the Chinese version.
 12 INTERPRETER SHAO: The
 13 interpreter could not find a link to
 14 1A.
 15 MR. BERNARDO: Stephanie, can
 16 you help us here?
 17 MS. MARTIN: Yep. You probably
 18 just need to refresh. I just loaded
 19 it seconds ago.
 20 THE WITNESS: Are you referring
 21 to 466B?
 22 MS. MARTIN: Defense 1B.
 23 THE WITNESS: Hold on. 1B.
 24 MS. MARTIN: And the prefix is

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1 Defense, not ZHP. It's Defense 1B.
 2 THE WITNESS: I see it. I see
 3 it.
 4 BY MR. BERNARDO:
 5 Q. Are you there, Ms. Ge?
 6 A. I see it. I see it.
 7 Q. And, Ms. Ge, what's been marked
 8 as Defense 1A and in Chinese 1B is an
 9 October 18, 2021 letter from US Food and Drug
 10 Administration.
 11 Are you familiar with this
 12 document?
 13 A. I've reviewed this document
 14 before.
 15 Q. Is this document the one that
 16 you were referring to in terms of the
 17 document in which the FDA made conclusions
 18 following the several-year process we just
 19 discussed?
 20 MR. SLATER: Objection.
 21 You can answer.
 22 THE WITNESS: That is correct.
 23 The letter also says from
 24 July 19, 2021 to July 29, 2021 they

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1 conducted an inspection of our
 2 facility and came up with this
 3 conclusion.
 4 BY MR. BERNARDO:
 5 Q. I'd like to draw your
 6 attention, Ms. Ge, to the first paragraph,
 7 the middle of the first paragraph. And it
 8 says, "FDA has determined that the inspection
 9 classification of this facility is a" -- "is
 10 'no action indicated.'" And then in
 11 parentheses it says "(NAI). Based on this
 12 inspection, this facility is considered to be
 13 in an acceptable state of compliance with
 14 regard to current good manufacturing
 15 practice." And then in parentheses it says
 16 "(CGMP)."
 17 Do you see that?
 18 A. Yes, I see it, indeed.
 19 Q. And is what I just read the
 20 conclusion that FDA reached after the
 21 back-and-forth over four years that you just
 22 described in your earlier testimony with ZHP
 23 and the FDA?
 24 MR. SLATER: Objection.

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1 You can answer.
2 THE WITNESS: That is correct.
3 Not only based on our response to them
4 and our communication to them, FDA
5 also conducted an on-site inspection
6 and verification.
7 Based on all the material they
8 received, they came up with the
9 conclusion that our facility is an NAI
10 facility and that we are in compliance
11 with cGMP.
12 BY MR. BERNARDO:
13 Q. And again, NAI that you just
14 referred to means "no action indicated"?
15 MR. SLATER: Objection.
16 You can answer.
17 THE WITNESS: That is correct.
18 "NAI" is one of the terms used by FDA,
19 meaning "no action indicated."
20 BY MR. BERNARDO:
21 Q. Drawing your attention to
22 further down on the same page, the last
23 paragraph, it says, "FDA has concluded that
24 this inspection is 'closed' under 21 CFR

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1 20.64(d)(3)."
2 Do you see that?
3 A. Yes.
4 Q. Do you have an understanding of
5 what that means, Ms. Ge?
6 A. Not only this sentence, but
7 also including the EIR report and the warning
8 letter and our responses, the whole process
9 is closed.
10 INTERPRETER SHAO: The
11 interpreter would like to make a
12 global correction if necessary, about
13 EIR report. In the prior translation,
14 it may be mistakenly translated as
15 "EIA report."
16 A. After the inspection of
17 facility was regarded as NAI, and they came
18 up with the conclusion that we were in
19 compliance with cGMP, which means that all
20 that happened prior to that, including the
21 warning letters, was closed. That's my
22 understanding.
23 BY MR. BERNARDO:
24 Q. And, Ms. Ge, does this

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1 October 18, 2021 report go through in the
2 following 24 pages discussions of the various
3 deficiencies or issues that were first raised
4 in the 2018 warning letter, to your
5 knowledge?
6 MR. SLATER: Objection.
7 You can answer.
8 THE WITNESS: That is correct.
9 BY MR. BERNARDO:
10 Q. If you look way at the back of
11 the report, Ms. Ge, on pages 22, 23, and -- I
12 guess 22 and 23, it lists out a number of
13 exhibits.
14 Do you see that?
15 MR. SLATER: Objection.
16 THE WITNESS: Yes, I see them.
17 MR. BERNARDO: Steph, would you
18 bring up page 22, please?
19 Thank you.
20 BY MR. BERNARDO:
21 Q. And if you see in the right,
22 Ms. Ge, it gives you page numbers, and if you
23 add them up, there are hundreds of pages, is
24 that fair?

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1 A. I believe that is the case.
2 Q. And do you have an
3 understanding of what these exhibits are
4 generally, Ms. Ge?
5 A. Yes, I do.
6 Q. And tell us what they are,
7 please.
8 A. Those exhibits were the
9 documents they reviewed and collected and
10 brought back to FDA in their inspection in
11 2018. These documents are all quality
12 documents.
13 Q. So these are documents that ZHP
14 provided in support of its position during
15 this period of back-and-forth with FDA over
16 several years?
17 MR. SLATER: Objection.
18 THE WITNESS: That is correct.
19 This is an incomplete list of
20 documents we provided in the
21 back-and-forth communication with FDA
22 over those few years.
23 There are quite a few documents
24 that were not listed here.

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1 BY MR. BERNARDO:
2 Q. Thank you, Ms. Ge.
3 I just want to take a minute to
4 go through one example of an issue they
5 discuss.
6 And if you could turn to page 9
7 of Exhibit 1A and 1B. So if you look at
8 page -- I'm sorry.
9 A. I see it.
10 Q. Thank you.
11 If you look at the section --
12 there's a section called Customer Complaints.
13 Do you see that?
14 Or "Customer Complaint." I'm
15 sorry.
16 A. Yes, I see it.
17 Q. And I want you to look in the
18 middle of that paragraph, where it says, "A
19 total of eight technical communications were
20 investigated as complaints for unknown
21 peaks."
22 Do you see that?
23 A. Yes, I see it.
24 Q. And it continues to say, "The

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1 firm performed the investigation and assessed
2 if the peaks were part of the impurity
3 profile of the API or resulted as part of the
4 manufacturing process. The investigation
5 report was provided to the customers."
6 Do you see that?
7 A. I see it.
8 Q. And do you recall Mr. Slater
9 raised with you the issue of unknown peaks
10 that was raised in November of 2018 and that
11 they hadn't been investigated?
12 Do you recall that?
13 MR. SLATER: Objection.
14 You can answer.
15 THE WITNESS: I don't quite
16 recall.
17 BY MR. BERNARDO:
18 Q. Okay. Well, let me ask you to
19 read on with me, where it says, "None of the
20 technical communications reviewed were
21 related to nitrosamine issues."
22 Do you see that?
23 MR. SLATER: Objection.
24 You can answer.

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1 THE WITNESS: I see it. That's
2 true.
3 BY MR. BERNARDO:
4 Q. So am I understanding this
5 correctly, that FDA looked at these unknown
6 peaks and concluded that none of them related
7 to nitrosamine issues, is that correct?
8 MR. SLATER: Objection.
9 You can answer.
10 THE WITNESS: That is correct.
11 BY MR. BERNARDO:
12 Q. And going back to what we
13 talked about on the first page, so after this
14 investigation, as we just went over a little
15 while ago, FDA found that ZHP was in
16 compliance with cGMP, is that correct?
17 MR. SLATER: Objection.
18 You can answer.
19 THE WITNESS: That is correct.
20 MR. BERNARDO: Thank you,
21 Ms. Ge.
22 And subject to any questions I
23 might follow up that Mr. Slater may
24 ask, I have no further questions at

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1 this point, but I do want to thank you
2 for your time and your travel to live
3 testimony here.
4 THE WITNESS: I would like also
5 to thank you and your colleagues for
6 your help in preparation of the three
7 topics, because I really got a lot of
8 help from you. Thank you.
9 MR. SLATER: Chris, let's put
10 up the patent in Mandarin,
11 ZHP01812101, please. Perfect.
12 (Whereupon, Exhibit Numbers
13 were ZHP-469A and ZHP-469B were marked
14 for identification.)
15 FURTHER EXAMINATION
16 BY MR. SLATER:
17 Q. Do you see on the screen is the
18 patent we've been talking about that was
19 referenced in Jinsheng Lin's e-mail? Do you
20 see that on the screen?
21 A. Yes.
22 Q. And you see in the top right
23 there's a number for the patent, 103613558.
24 Do you see that?

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1 A. Hold up. Let me find it. Are
2 you --
3 Q. Top right corner.
4 A. -- referring to the application
5 announcement number?
6 Q. Yes.
7 A. I see it.
8 Q. Great. Let's put that aside
9 for a second and let's go to the valsartan
10 patent investigation report now.
11 Have you ever seen this
12 document?
13 (Whereupon, Exhibit Number
14 ZHP-170 was marked for
15 identification.)
16 A. I saw the patent application
17 document, which was listed as one of the
18 exhibits on the list that was shown to me
19 previously.
20 BY MR SLATER:
21 Q. Do you see the document on the
22 screen?
23 A. I see the document on the
24 screen.

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1 Q. What is the title of the
2 document?
3 A. It says here, "Valsartan Patent
4 Investigation Report?"
5 MR. SLATER: And let's go
6 now -- let's go now to the page which
7 is ZHP02336682.
8 Perfect.
9 Q. Do you see right there in the
10 middle of the page the number for the patent
11 that we've been talking about that was
12 referenced in the Jinsheng Lin e-mail? Do
13 you see the number right there?
14 A. Yes, I see it.
15 Q. And this document, it's my
16 understanding from the metadata, was last
17 modified -- well, let me actually ask it
18 differently.
19 It's my understanding that this
20 is the 2015 fourth quarter update of the
21 valsartan patent investigation report.
22 Do you have any reason to doubt
23 that?
24 A. Well, I don't know where you

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1 came up with this time point like first
2 quarter of 2015. I've never read this
3 document before, so I don't even know how you
4 could come up with that number.
5 Q. I'm going to tell you in one
6 second.
7 Wait a second. Hang on.
8 You'll have to just bear with me for one
9 second.
10 I got it. The electronic file
11 name of the document, I'm advised, is that is
12 the 2015 Q4 update.
13 So my question is this.
14 Assuming that to be correct, ZHP actually had
15 reviewed this patent several years before
16 Jinsheng Lin saw it, because it would be back
17 in, at least at the latest, 2015, a couple
18 years earlier than his e-mail, and that would
19 undercut everything he told you, wouldn't it?
20 You can answer that question.
21 MR. BERNARDO: Object to the
22 form of the question.
23 THE WITNESS: That's not
24 correct.

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1 BY MR. SLATER:
2 Q. If this is -- rephrase.
3 If I am correct that this
4 valsartan patent investigation report that
5 you're looking at was updated at the latest
6 2015 fourth quarter, that would mean that ZHP
7 had it in its possession and had reviewed the
8 patent no later than 2015, correct?
9 MR. BERNARDO: Object to the
10 form of the question.
11 THE WITNESS: That's not
12 correct. I don't know how you came up
13 with the idea that this patent was
14 reviewed in the fourth quarter of
15 2015. The document itself didn't say
16 so.
17 BY MR. SLATER:
18 Q. Wait one second.
19 All right. We're putting a
20 document up. Just so you know, we're pulling
21 up the documentation that I believe will show
22 the date.
23 Let me ask you this question.
24 If, in fact, this patent was reviewed in 2014

<p style="text-align: right;">Page 273</p> <p>1 or 2015, you would agree that ZHP should have 2 taken action in response to what it learned 3 from the patent at that time, correct? 4 MR. BERNARDO: Object to the 5 form of the question. 6 THE WITNESS: Your hypothesis 7 is not legitimate. 8 Based on my communication with 9 Jinsheng Lin and Peng Dong, it's true 10 that they were not aware of this until 11 2017 after a search was conducted. 12 Prior to that, they were not aware of 13 this. 14 BY MR. SLATER: 15 Q. I'm going to advise you that 16 the metadata for this document indicates that 17 it was last modified November 4, 2014. 18 So based on that, your company 19 actually did have access to this patent, and 20 in fact, part of what your company routinely 21 does is patent infringement analysis to make 22 sure you're not infringing other patents, 23 correct? 24 MR. BERNARDO: Object to the</p>	<p style="text-align: right;">Page 275</p> <p>1 expecting to talk about the patent that you 2 actually have in your binder and that you 3 prepared to talk about as part of your 4 explanation for the Jinsheng Lin e-mail? 5 Is that your testimony under 6 oath? 7 MR. BERNARDO: Object to the 8 form of the question and the 9 characterization of her testimony. 10 THE WITNESS: You must have 11 misunderstood my prior testimony, 12 because my prior testimony didn't say 13 so. 14 Talking about this patent, I 15 was told that basically I need to talk 16 about the topic of ZHP's knowledge of 17 NDMA. With that, this e-mail with the 18 attached patent would be in the scope. 19 So I prepared for that patent. 20 I was not prepared in general 21 for the topic of patents. 22 MR. SLATER: Let's take that 23 down. 24 ///</p>
<p style="text-align: right;">Page 274</p> <p>1 form of the question. 2 THE WITNESS: I don't know the 3 patent analysis that you just 4 mentioned. After all, I work in the 5 quality assurance department. 6 Also, I was not told to be 7 prepared for the topic of patent for 8 this deposition. 9 BY MR. SLATER: 10 Q. You walked into this deposition 11 with a binder containing a patent and used 12 that as the justification for your 13 explanation for the Jinsheng Lin e-mail, and 14 you're saying you came here not ready to talk 15 about a patent? 16 MR. BERNARDO: Object to the 17 form of the question. 18 BY MR. SLATER: 19 Q. Specifically, the patent that 20 you walked into this deposition expecting to 21 talk about? 22 Let me rephrase it. I'm going 23 to withdraw it and start again. 24 You're saying you were not</p>	<p style="text-align: right;">Page 276</p> <p>1 BY MR. SLATER: 2 Q. You went through some 3 correspondence between ZHP and the FDA years 4 after the FDA warning letter was sent. 5 Remember you just talked about 6 that with your counsel? 7 A. I went through the related 8 response, yes. 9 Q. None of that later 10 correspondence indicated that ZHP didn't 11 violate -- let me start over. 12 None of the -- rephrase. 13 None of that correspondence 14 indicated that ZHP did not deviate from cGMP, 15 meaning -- I've got to -- sorry, I'm tired. 16 I'm going to start over. 17 MR. BERNARDO: Take three. 18 MR. SLATER: I'm almost done, 19 so let's see if I can just muster 20 enough energy to get one coherent 21 sentence out. 22 BY MR. SLATER: 23 Q. None of that -- rephrase. 24 None of those communications</p>

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1 from the FDA stated that ZHP was in
2 compliance with cGMP when it was
3 manufacturing and selling the valsartan that
4 was contaminated with NDMA, correct?
5 MR. BERNARDO: Object to the
6 form of the question.
7 THE WITNESS: Your question
8 sounds very strange to me. That is
9 because in our response to FDA's
10 letter, we already stated our
11 company's position that we have been
12 in compliance with cGMP in response to
13 FDA's findings.
14 While we were working with
15 them, we always insisted that we have
16 been in high-quality -- high-quality
17 compliance with GMP during all the
18 responses to FDA.
19 BY MR. SLATER:
20 Q. The FDA obviously disagreed and
21 felt that when you manufactured the valsartan
22 and the manufacturing process was creating
23 NDMA that was contaminating the pills for
24 years, that despite ZHP thinking they were

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1 doing everything right, the FDA just
2 disagreed, right?
3 MR. BERNARDO: Object to the
4 form of the question.
5 THE WITNESS: As in the later
6 correspondence with the FDA, as well
7 as the report presented by Rich just
8 now, FDA asked us to keep providing
9 exhibits and evidence, which we did.
10 After receiving and reviewing
11 those exhibits, they also conducted an
12 online inspection.
13 Finally they came to the
14 conclusion that our facility is in the
15 status of NAI, and in their report
16 they also acknowledged that we were in
17 compliance with cGMP.
18 BY MR. SLATER:
19 Q. Right.
20 After three years of fixing the
21 problems, changing your manufacturing
22 process, and taking steps to try to correct
23 the deviations the FDA had found, after those
24 three years or so, then they released the

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1 import ban and said that you were in
2 compliance. That's what happened?
3 MR. BERNARDO: Object to the
4 form of the question.
5 THE WITNESS: That is
6 incorrect. As in my prior statement,
7 right after receiving the warning
8 letter from FDA, we responded to FDA
9 our position is that we were always in
10 compliance with cGMP.
11 FDA did not disagree with that.
12 Instead, they just asked us to submit
13 more exhibits, more documents, and
14 then they reviewed all those
15 documents, and that's about it. So
16 that is my first point.
17 Second point is that, indeed,
18 in order to work with the FDA, we made
19 some corrections and improvements.
20 But that didn't mean that we were not
21 in compliance with GMP.
22 BY MR. SLATER:
23 Q. So when the FDA said in the
24 warning letter of November 29, 2018 that your

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1 methods, facilities, or controls for
2 manufacturing, processing, packing, or
3 holding do not conform to cGMP and your API
4 were adulterated, the FDA was telling you
5 they thought you were doing a good job and
6 there were no problems?
7 Is that your understanding?
8 MR. BERNARDO: Object to the
9 form of the question.
10 INTERPRETER SHAO: Sorry, the
11 interpreter is asked for a repeat of
12 the rendition, simply because the
13 witness was distracted with a phone
14 call from the front desk.
15 THE WITNESS: That is
16 incorrect. Your interpretation is
17 incorrect. That is incorrect. Your
18 understanding is incorrect.
19 Actually, it is within the
20 scope of FDA's authority to issue a
21 warning letter to us, which they did
22 in 2018. They also gave us the right
23 to come up with a response.
24 In that response, we already

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1 made our position very clear that we
2 were in compliance with cGMP, but we
3 still communicated with them.
4 FDA never disagreed with us.
5 They only asked us to provide
6 additional documents and evidence and
7 asked us to do this, then do that, but
8 they never disagreed with us that we
9 were in compliance with CGMP.
10 After working with the FDA and
11 submitting all the documents,
12 eventually FDA issued this EIR report,
13 which was shown in the approval
14 letter.
15 BY MR. SLATER:
16 Q. You also had to change your
17 manufacturing process so that you would not
18 create NDMA and contaminate your valsartan
19 with it any longer.
20 That's a true statement?
21 Please say yes or no.
22 MR. BERNARDO: Object to the
23 form of the question.
24 THE WITNESS: It is not a true

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1 statement.
2 BY MR. SLATER:
3 Q. So ZHP continued to manufacture
4 valsartan with the zinc chloride sodium
5 nitrite quenching process creating NDMA, and
6 you were allowed to keep selling valsartan
7 with NDMA?
8 Is that your testimony to this
9 jury?
10 MR. BERNARDO: Object to the
11 form of the question.
12 THE WITNESS: This is totally
13 incorrect.
14 MR. SLATER: I'm done.
15 MR. BERNARDO: Okay. And at
16 the risk of being shot, I just have a
17 few very quick questions.
18 MR. SLATER: Then I'm going to
19 have more follow-up, I'm telling you
20 right now. I'm trying to -- and
21 this -- I can't get -- let me tell you
22 where I'm coming from on this.
23 I can't get a straight answer
24 to simple questions. Simple things

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1 are all denied.
2 I was going to end the
3 deposition just to mercifully put us
4 out of our misery, but I will tell you
5 right now if you ask more questions,
6 I'm going to follow up, and I'm going
7 to go until she finally admits basic
8 facts.
9 You can do whatever you want.
10 But I have a lot more that I would do
11 normally, but I'm just willing to
12 stop. But if you're going to
13 continue, then I'm going to continue,
14 and that's what we're going to do.
15 Because if I can't get a
16 straight answer to a question -- I
17 just spent 20 minutes trying to get
18 her to admit such basic things; she
19 doesn't want to do it.
20 You do whatever you want, but
21 I'm coming back after you're done and
22 I'm following up again.
23 MR. BERNARDO: I'm not going to
24 go back and forth with you, Adam,

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1 other than to say I disagree with you.
2 If you want to follow up the
3 questions I have with respect to the
4 topic and the specific questions I am
5 asking her, you may. You may not go
6 and reopen the deposition on other
7 questions.
8 MR. SLATER: Oh, really? You
9 mean like when you just went into
10 documents I hadn't even asked any
11 questions about on your questioning?
12 You can continue. Go ahead.
13 FURTHER EXAMINATION
14 BY MR. BERNARDO:
15 Q. Ms. Ge, do you have
16 responsibility for evaluating patents for
17 infringement?
18 A. No. As I stated earlier, I was
19 not responsible for patents. I worked in the
20 QA.
21 Q. Do you know what the process is
22 for evaluating patents for patent
23 infringement?
24 A. I'm not familiar with this

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1 process at all. My scope is GMP, which has
2 nothing to do with it.
3 Q. Do you have an understanding of
4 how reports like the one that Mr. Slater
5 showed you a few minutes ago are prepared?
6 A. I already stated just now, I
7 have no idea at all.
8 Q. Do you know if they're even
9 reviewed?
10 A. I don't know. I've never seen
11 this document before.
12 MR. BERNARDO: That's all I
13 have.
14 MR. SLATER: No further
15 questions.
16 MR. BERNARDO: Thank you very
17 much, Ms. Ge. I hope you have safe
18 travels back to your home.
19 MR. SLATER: Very nice to see
20 you. We'll see you in New Jersey
21 probably at some point soon.
22 THE VIDEOGRAPHER: The time
23 right now is 1:17 p.m. We're off the
24 record.

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1 (Whereupon, the deposition was
2 concluded.)
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1 CERTIFICATE
2
3 I, MAUREEN O'CONNOR
4 POLLARD, Registered Diplomate
5 Reporter, Realtime Systems
6 Administrator, and Certified Shorthand
7 Reporter, do hereby certify that prior
8 to the commencement of the
9 examination, JUCAI GE, was remotely
10 duly identified and sworn by me to
11 testify to the truth, the whole truth,
12 and nothing but the truth.
13 I DO FURTHER CERTIFY that
14 the foregoing is a verbatim transcript
15 of the testimony as taken
16 stenographically by and before me at
17 the time, place, and on the date
18 hereinbefore set forth, to the best of
19 my ability.
20 I DO FURTHER CERTIFY that
21 I am neither a relative nor employee
22 nor attorney nor counsel of any of the
23 parties to this action, and that I am
24 neither a relative nor employee of
such attorney or counsel, and that I
am not financially interested in the
action.

MAUREEN O'CONNOR POLLARD
NCRA Registered Diplomate Reporter
Realtime Systems Administrator
Certified Shorthand Reporter
Notary Public

Dated: June 2, 2022

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1 INSTRUCTIONS TO WITNESS
2
3 Please read your deposition over
4 carefully and make any necessary corrections.
5 You should state the reason in the
6 appropriate space on the errata sheet for any
7 corrections that are made.
8 After doing so, please sign the
9 errata sheet and date it. It will be
10 attached to your deposition.
11 It is imperative that you return
12 the original errata sheet to the deposing
13 attorney within thirty (30) days of receipt
14 of the deposition transcript by you. If you
15 fail to do so, the deposition transcript may
16 be deemed to be accurate and may be used in
17 court.
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1
2 ACKNOWLEDGMENT OF DEPONENT
3
4 I, _____, do
5 Hereby certify that I have read the foregoing
6 pages, and that the same is a correct
7 transcription of the answers given by me to
8 the questions therein propounded, except for
9 the corrections or changes in form or
10 substance, if any, noted in the attached
11 Errata Sheet.
12
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17 _____
18 WITNESS NAME DATE
19
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Subscribed and sworn
To before me this
_____ day of _____, 20____.

My commission expires: _____

Notary Public